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ARTICLE IV.

Description of New Fresh Water and Land Shells. By Isaac Lea. Read May 2d, 1845.

THE rich Fauna of our country, not yet completely explored, gives me the opportunity of again presenting myself before the Society with descriptions of many new organisms of an interesting nature to the zoologist. The unexplored portions of Tennessee, Alabama, and Louisiana contribute nearly the whole of the species composing this paper—some of them of more than ordinary interest. It will be observed that I have now added twenty-three new species to the already long list of the *Melania*, my last paper containing fifty-seven. I also add six to the interesting genus *Schizostoma*—now making ten species in all—and twenty-six to the family *Naiades*.

In the investigation and necessary research to make myself acquainted with the genus *Melania*, I have necessarily looked up the names of all the known species, and for my own convenience have made an alphabetic list, which I propose to append, for the convenience of those who study this genus. The whole consists of three hundred and ninety-five names, by various authors, but I do not mean to be understood that these are all distinct species—a few are doubtless duplicated. Part of them are fossil.

Regarding my own species, it will be observed that, among some of them, there is a strong alliance; but I have abstained from considering them as typical where I could not find what I presumed to be a constant character. At the same time, I am perfectly aware of the extreme difficulty of separation, arising from the fact of the existence of the vast number of species now described as belonging to this genus, and their consequent inosculation. Where my mind was satisfied, however, after a close and careful examination, that their characteristics were persistent, I have put them down with confidence that they would, in the main, be found to be correct.

UNIO HIPPOCÆUS. Pl. I. Fig. 1.

Testâ plicatâ, ellipticâ, valdè inflatâ; valvulis subcrassis; natibus prominulis; epidermide luteo-fuscâ, striatâ; dentibus cardinalibus subgrandibus; lateralibus parvis curvisque; margaritâ albâ et iridescente.

Shell elliptical, folded, much inflated; valves rather thick; beaks rather prominent; epidermis yellowish-brown, striate; cardinal teeth rather large; lateral teeth small and curved; nacre white and iridescent.

Hab. Lake Erie—B. W. Budd, M. D.

My cabinet and cabinet of Dr. Budd.

Diam. 1.1, Length 1.5, Breadth 2.1 inches.

Shell elliptical, with a few folds on the middle of the disk, and much inflated; substance of the shell rather thick, thinner behind; beaks rather prominent; ligament short and thick; epidermis yellowish-brown and much striate; cardinal teeth rather larger, double in the left and disposed to be treble in the right valve; lateral teeth small, somewhat bladed and curved; anterior cicatrices distinct; posterior cicatrices confluent; dorsal cicatrices placed on the under side of the cardinal tooth; cavity of the shell large and rounded; cavity of the beaks deep and angular; nacre white and iridescent.

Remarks.—This is a small, undulated species, most nearly allied to *U. plicatus*, Lesueur. A single one only is before me for examination, but Dr. Budd informs me that he received about twenty specimens, all bearing the same characters. Had a single specimen only been observed, I should have been disposed to consider it a stunted *plicatus*, with more inflation than usual, and with less development of the folds.

UNIO LATECOSTATUS. Pl. I. Fig. 2.

Testâ crebrè plicatâ, ellipticâ, compressâ; valvulis crassis; natibus prominulis; epidermide tenebroso-fuscâ, valdè striatâ; dentibus cardinalibus magnis; lateralibus longis subrectisque; margaritâ albâ et valdè iridescente.

Shell much folded, elliptical, compressed; valves thick; beaks slightly prominent; epidermis dark-brown, much striated; cardinal teeth large; lateral teeth long and nearly straight; nacre white and very iridescent.

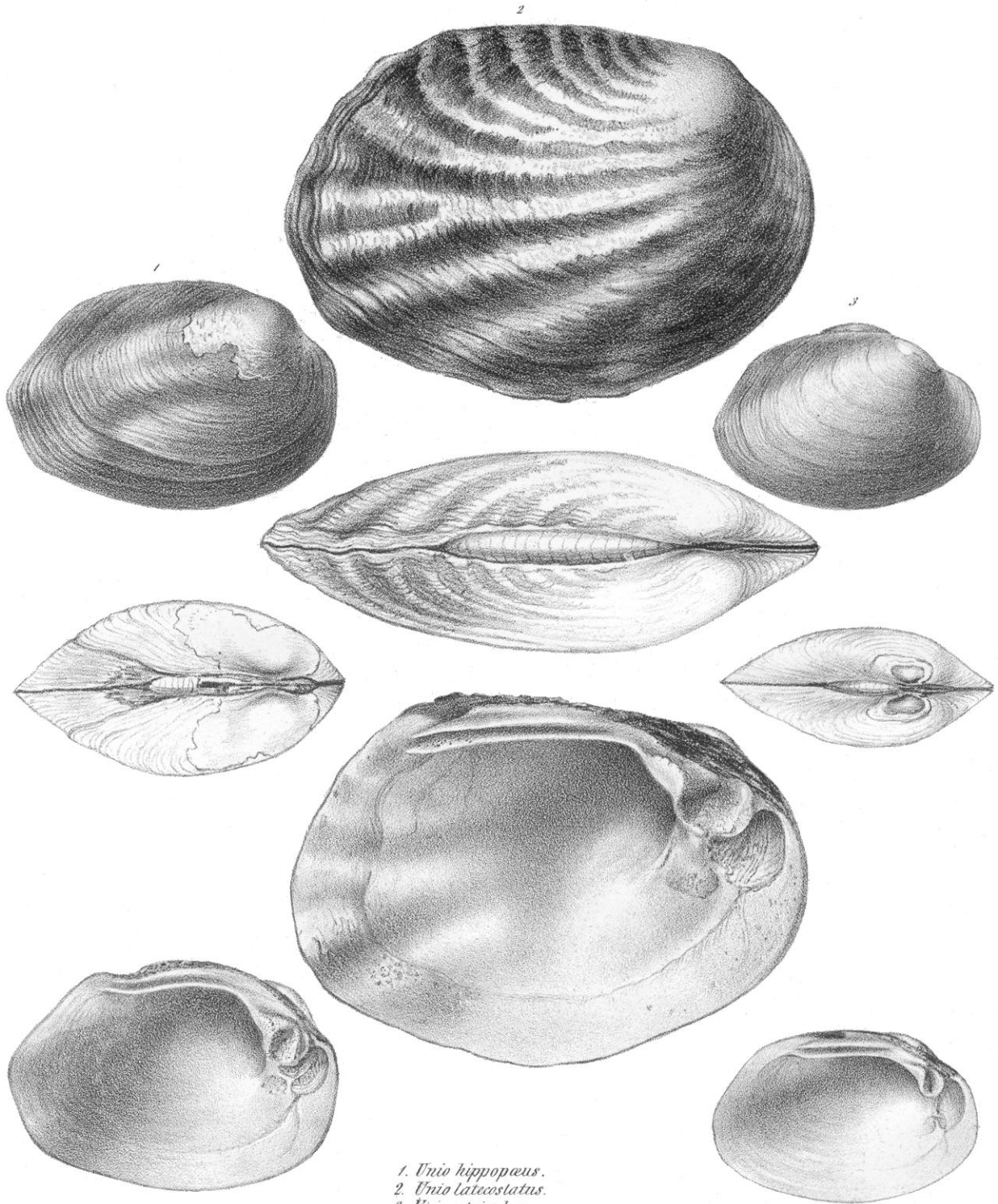
Hab. Tuscaloosa, Alabama. B. W. Budd, M. D.

My cabinet and cabinet of Dr. Budd.

Diam. 1.3, Length 2.5, Breadth 3.5 inches.

Shell very much folded over the whole disk, with thick ribs, visible on the inside, remarkably oval, much compressed; substance of the shell thick before, thinner behind; beaks scarcely prominent; ligament long and rather thick; epidermis very dark-brown, nearly black and much striate; cardinal teeth very large and thick, double in the left and single in the right valve; lateral teeth long, rather thin, and nearly straight; anterior cicatrices distinct; posterior cicatrices confluent; dorsal cicatrices placed on the under side of the cardinal tooth; cavity of the shell very shallow; cavity of the beaks shallow and somewhat angular; nacre white, tinged with purple on the posterior margin, and very iridescent.

Remarks.—But two specimens of this species were received by Dr. Budd, and my cabinet is indebted to him for one of them. The large, regular, and thick fold, and regular oval margin distinguish this shell from the proximate species. It is perhaps most closely allied to *U. undulatus*, Barnes, but may be distinguished at once by its oval form, and the number and regularity of its folds or ribs, which are remarkably parallel. The posterior portion of the valves being rather thin, causes the thick ribs to be impressed on the inside, which has a very unusual and brilliant iridescence, tinged with purple in the nacre. The cardinal teeth are very large in proportion to the lateral teeth.



UNIO UTRICULUS. Pl. I. Fig. 3.

Testâ lævi, ellipticâ, inflatâ; valvulis subcrassis; natibus subprominentibus; epidermide tenebroso-fuscâ; dentibus cardinalibus parvis; lateralibus longis rectisque; margaritâ alba et valdè iridescente.

Shell smooth, elliptical, inflated; valves rather thick; beaks rather prominent; epidermis dark-brown; cardinal teeth small; lateral teeth long and straight; nacre white and very iridescent.

Hab. North Carolina. B. W. Budd, M. D.

My cabinet and cabinet of Dr. Budd.

Diam. .8, Length 1.1, Breadth 1.7 inches.

Shell smooth, regularly elliptical, inflated, very inequilateral, obscurely angular on the umbonial slope; substance of the shell thick before and thin behind; beaks rather prominent; ligament short and thin; epidermis very dark-brown, without rays, and with regular, nearly equidistant lines of growth; cardinal teeth very small, erect, and sharp; lateral teeth long and straight; anterior cicatrices distinct; posterior cicatrices distinct; dorsal cicatrices placed on the under side of the cardinal tooth; cavity of the shell rather deep and rounded; cavity of the beaks shallow and rounded; nacre very white and beautifully iridescent.

Remarks.—Two specimens of this species were received by Dr. Budd. They came with the others from North Carolina, and no doubt from one of the tributaries of the Tennessee river. This species has some resemblance to *U. Vanuxemensis*, (Nobis,) and *U. glans*, (Nobis,) but need not be confounded with either of them. It is less flat than the former, and not so much inflated as the latter, and is dissimilar to each in having a white nacre.

UNIO HYALINUS. Pl. II. Fig. 4.

Testâ lævi, obovatâ, subinflatâ, diaphanâ; valvulis pertenuibus; natibus prominulis, ad apices undulatis; epidermide tenebroso-fuscâ; dentibus cardinalibus parvis, compressis; lateralibus longis rectisque; margaritâ cœruleo-albâ et iridescente.

Shell smooth, obovate, subinflated, transparent; valves very thin; beaks slightly prominent, undulated at the beaks; epidermis dark-brown; cardinal teeth small and compressed; lateral teeth long and straight; nacre bluish-white and iridescent.

Hab. Richmond, Virginia. Major Le Conte.

Cabinet of Major Le Conte.

Diam. .5, Length .9, Breadth 1.4 inches.

Shell smooth, obovate, rather inflated, transparent; carinate on the posterior slope; substance of the shell very thin; beaks slightly prominent, minutely undulated at the tips; ligament very short and thin; epidermis dark-brown and obscurely rayed; cardinal teeth single in the right valve and slightly cleft in the left valve; lateral teeth single in both valves, long and compressed; anterior cicatrices distinct; posterior cicatrices confluent; dorsal cicatrices placed immediately on the centre of the cavity of the beaks; cavity of the shell rather shallow; cavity of the beaks very shallow and angular; nacre bluish-white and iridescent.

Remarks.—Major Le Conte placed in my hands a single specimen of this species, which he procured from Richmond. It is a distinct and peculiar species which cannot be easily

confounded with any other, except one from the Chatahoochee, for which I propose the name of *pellucidus*. It is more triangular than that shell, and differs in the peculiarity of the lateral teeth in both valves being single, while in that shell it is double in the right valve.

UNIO ATRO-COSTATUS. Pl. II. Fig. 5.

Testâ plicatâ, subquadratâ, inflatâ; valvulis crassis; natibus prominentibus; epidermide nigrâ, striatâ; dentibus cardinalibus magnis; lateralibus sublongis subrectisque; margaritâ albâ et iridescente.

Shell folded, somewhat quadrate, inflated; valves thick; beaks somewhat prominent; epidermis black and striate; cardinal teeth large; lateral teeth rather long and nearly straight; nacre white and iridescent.

Hab. Claiborne, Alabama—Judge Tait. Tuscaloosa, Alabama—B. W. Budd, M. D. Alexandria, Louisiana—Josiah Hale, M. D.

My cabinet and cabinets of Dr. Budd and Dr. Hale.

Diam. 1.6,

Length 2.5,

Breadth 3 inches.

Shell folded, somewhat quadrate, inflated; substance of the shell thick, thinner behind; beaks large, rounded, and rather prominent; ligament rather short and thick; epidermis black and striate; cardinal teeth very large, thick, and wide, double in the left and disposed to be treble in the right valve; lateral teeth rather long and nearly straight; anterior cicatrices distinct; posterior cicatrices confluent; dorsal cicatrices on the under side of the plate near to the cardinal tooth; cavity of the shell rather deep and rounded; cavity of the beaks shallow and angular; nacre white and iridescent.

Remarks.—The late Judge Tait sent me several specimens of this species, many years ago, and subsequently I have received specimens from Drs. Hale and Budd, which have cleared up my previous doubts of its being distinct from its allied species *U. undulatus*, Barnes. It may be distinguished by the outline of *atro-costatus* being more rounded—scarcely taking a quadrate form—in having a more elevated umbo, and in being quite black, where the individual is mature—the young being usually a dark-green.

The specimens, six in number, sent to me by Dr. Budd, are all from Tuscaloosa, and are only slightly folded, the surface of the disk presenting small, irregular undulations, which give it a somewhat varicose or subnodose appearance. The largest of them is only two and a half inches wide, while the largest from Claiborne is nearly five inches wide. There is a slight purple tint on the posterior margin of those from Alexandria.

UNIO PELLUCIDUS. Pl. II. Fig. 6.

Testâ lævi, obovatâ, subcompressâ, pellucidâ; valvulis pertenuibus; natibus prominulis, ad apices undulatis; epidermide tenebroso-fuscâ; dentibus cardinalibus parvis, compressis erectisque; lateralibus longis, rectis lamellatisque; margaritâ cœruleo-albâ et iridescente.

Shell smooth, obovate, rather compressed, pellucid; valves very thin; beaks slightly prominent, undulated at the beaks; epidermis dark-brown; cardinal teeth small, compressed, and erect; lateral teeth long, straight and lamellar; nacre bluish-white and iridescent.

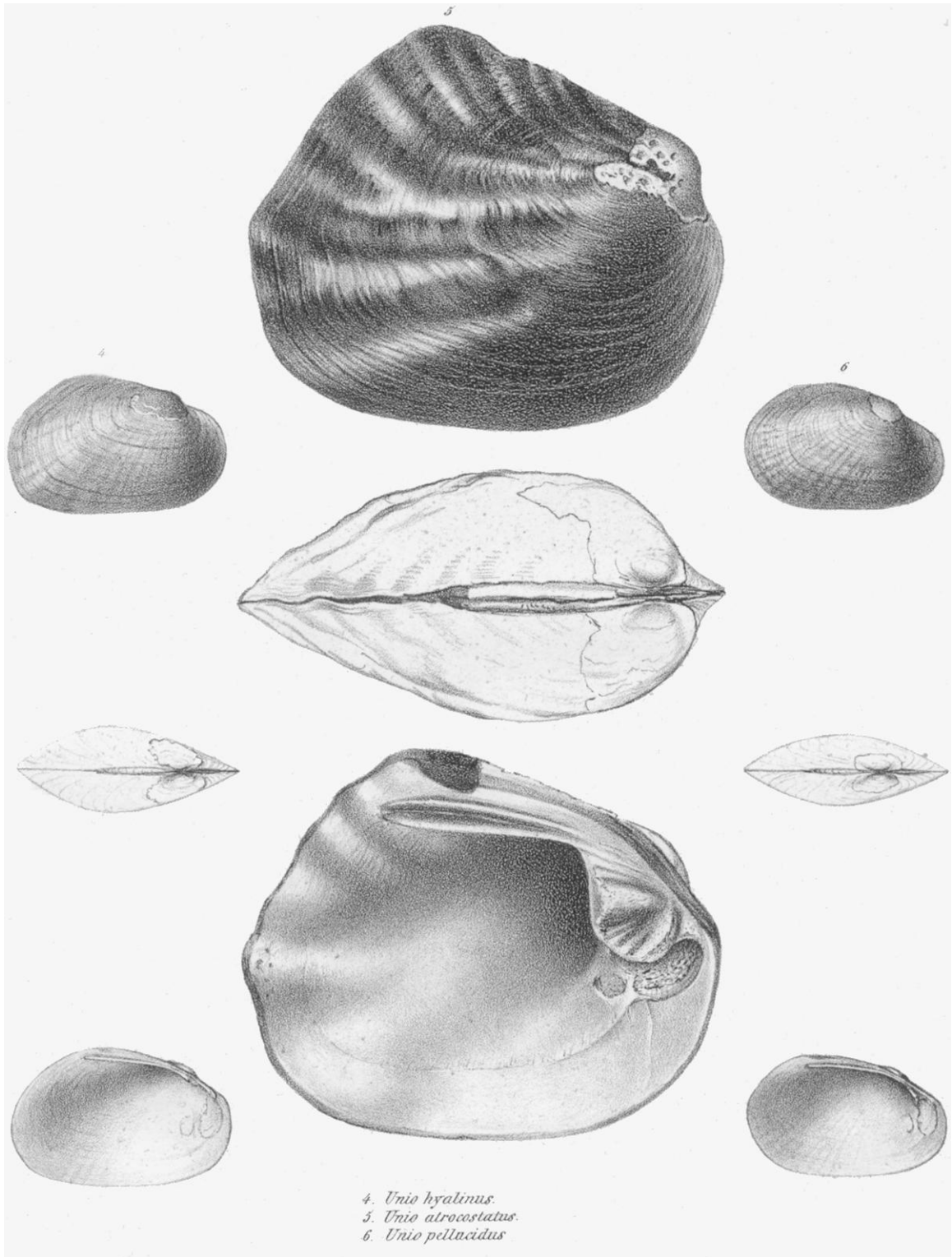
Hab. Chatahoochee river, Georgia. Major Le Conte.

Cabinet of Major Le Conte.

Diam. .5,

Length .8,

Breadth 1.3 inches.



Shell smooth, obovate, rather compressed, pellucid, very inequilateral, rounded and enlarged over the umbonial slope; substance of the shell very thin; beaks slightly prominent, minutely undulated at the tip; ligament very short and thin; epidermis dark-brown, and rayed nearly over the whole disk; cardinal teeth single in the right and double in the left valve; lateral teeth double in the right and single in the left valve, long, straight, and lamellar; anterior cicatrices distinct; posterior cicatrices confluent; dorsal cicatrices placed under the plate near to the cardinal tooth; cavity of the shell shallow; cavity of the beaks shallow and rounded; nacre bluish-white and very iridescent.

Remarks.—A single specimen only of this species is before me. It is allied to *U. hyalinus*, described herein, but may be distinguished at once by the form of the teeth, particularly the lateral one, which, in that shell, has the remarkable character of being single in both valves. In the *hyalinus* the carina of the posterior slope is much higher. In the specimen under examination the space about the cavity of the beaks is rubiginose. This may not be a prominent characteristic. The cardinal tooth of the left valve is peculiarly formed, having the superior portion very small, and almost forming a portion of the dorsal line.

UNIO TUMESCENS. Pl. III. Fig. 7.

Testâ lævi, triangulari, inflatâ; valvulis percrassis, natibus magnis elevatisque; epidermide tenebroso-fuscâ, radiatâ; dentibus cardinalibus parvis; lateralibus brevibus, crassis subcurvisque; margaritâ albâ et iridescente.

Shell smooth, triangular, inflated; valves very thick; beaks large and elevated; epidermis dark-brown, radiated; cardinal teeth small; lateral teeth short, thick and somewhat curved; nacre white and iridescent.

Hab. Alexandria, Louisiana. J. Hale, M. D.

My cabinet and cabinets of Dr. Hale and T. G. Lea.

Diam. .1,

Length 1.3,

Breadth 1.5 inches.

Shell smooth, triangular, inflated, flattened on the side from the beaks to the margin, angular on the umbonial slope, nearly equilateral; substance of the shell very thick, thinner behind; beaks large and elevated; ligaments short and thick; epidermis dark-brown, finely striate, and with green rays reaching to the margin; cardinal teeth small, and rather erect; lateral teeth short, thick, and somewhat curved, thickened at the posterior end; anterior cicatrices distinct; posterior cicatrices distinct; dorsal cicatrices placed under the cardinal tooth; cavity of the shell shallow, cavity of the beaks shallow and rounded; nacre white and iridescent.

Remarks.—This species is allied to *U. trigonus*, (Nobis,) and *U. Edgarianus*, (Nobis,) and somewhat resembles *U. obliquus*, Lam. It differs from *trigonus* in being more rounded and in having rays. It is fuller than *Edgarianus*, and is rayed somewhat like it. I have but one perfect specimen and a single odd valve of this species, and in all these three valves the superior posterior cicatrix is remarkably deep and round.

UNIO PERNODOSUS. Pl. III. Fig. 8.

Testâ pernodosâ, rotundatâ, subcompressâ; valvulis crassis; natibus elevatis; epidermide luteo-fuscâ; dentibus cardinalibus magnis; lateralibus brevibus, crassis subrectisque; margaritâ albâ.

Shell very nodulous, rounded, rather compressed; valves thick; beaks elevated; epidermis yellowish-brown; cardinal teeth large; lateral teeth short, thick and nearly straight; nacre white.

Hab. North Carolina. B. W. Budd, M. D.

My cabinet and cabinet of Dr. Budd.

Diam. 1.4, Length 2.2, Breadth 2.4 inches.

Shell tuberculate nearly all over, rounded, rather compressed on the sides and towards the margin; substance of the shell thick, thinner behind; beaks elevated; ligament rather short and thick; epidermis yellowish-brown, striate, and crimped; posterior slope impressed and thickly tuberculate; anterior slope nearly free from tubercles; cardinal teeth large, wide, and double in both valves; lateral teeth short, thick, and nearly straight; anterior cicatrices distinct; posterior cicatrices distinct; dorsal cicatrices placed on the under side of the cardinal tooth; cavity of the shell shallow; cavity of the beaks rather deep and angular; nacre white.

Remarks.—Three specimens of this species were sent to me by Dr. Budd, labelled "North Carolina." They are evidently from that portion of the state which is drained by the tributaries of the river Tennessee, and were accompanied by species common to the Holston, &c. In this we have another species which must be placed in the group which Mr. Barnes' *verrucosus* must be considered to form the type. It certainly is more nearly allied to that species than any other. It differs, however, from it in having a white nacre, instead of a chocolate-coloured one—in having smaller and more frequent tubercles, and in being more rounded in the outline. It differs from *Cooperianus*, (Nobis,) in the tubercles being smaller, more frequent, and in being more compressed. In the three specimens before me there is no indication of flesh colour, which usually is found in the *Cooperianus*. There is no indication of any rays on these specimens, and the beaks of all of them being eroded, they do not present the opportunity of observing their normal undulations.

UNIO FLAVESCENS. Pl. III. Fig. 9.

Testâ lævi, ellipticâ, subinflatâ; valvulis subtenuibus; natibus subprominentibus; epidermide luteo-corneâ, striatâ; dentibus cardinalibus parvis; lateralibus sublongis, subrectisque; margaritâ albâ et iridescente.

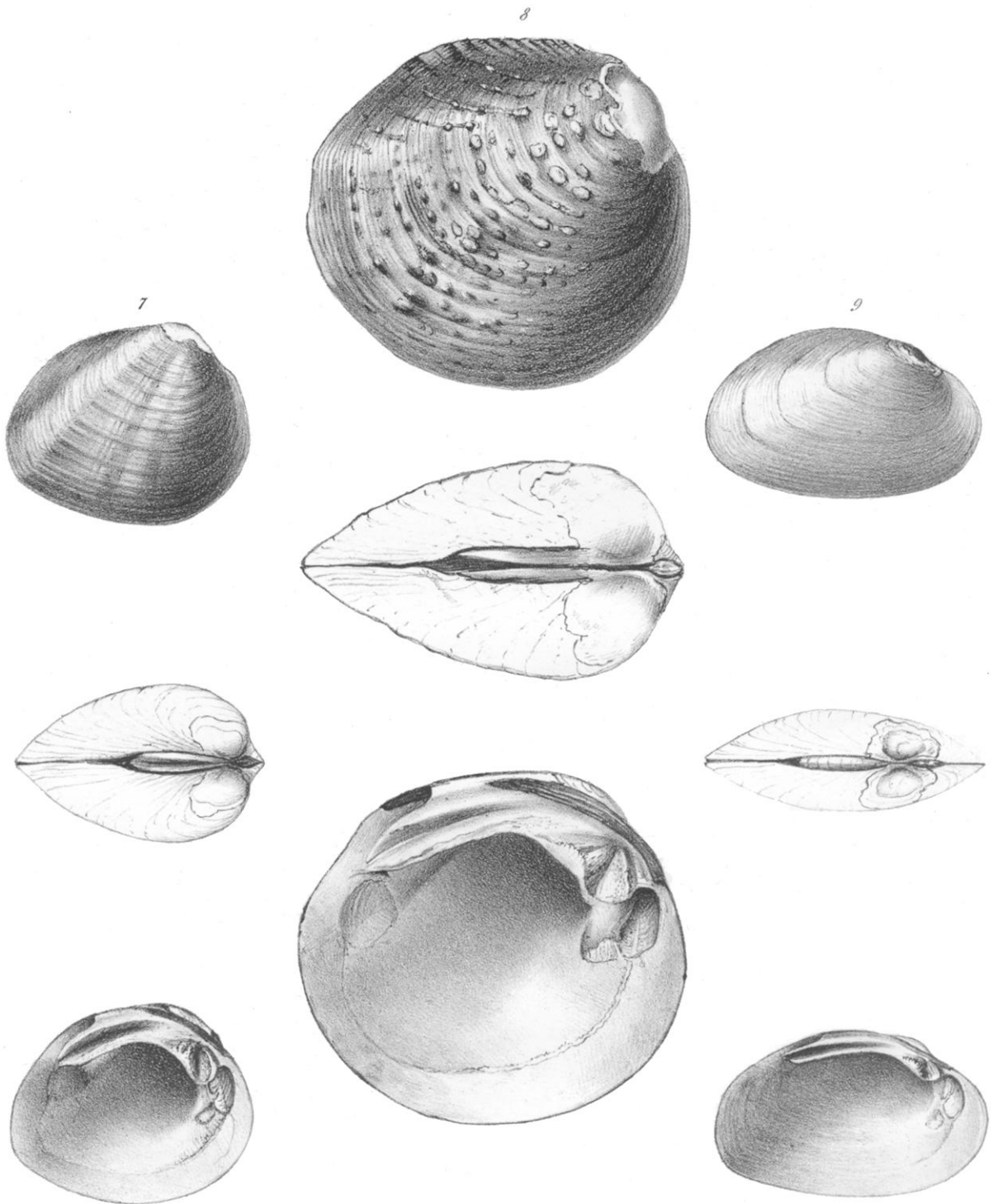
Shell smooth, elliptical, somewhat inflated; valves rather thin; beaks somewhat prominent; epidermis yellowish horn colour, striate; cardinal teeth small; lateral teeth rather long and nearly straight; nacre white and iridescent.

Hab. Black Warrior river, Alabama. B. W. Budd, M. D.

My cabinet and cabinet of Dr. Budd.

Diam. .7, Length 1.1, Breadth 1.7 inches.

Shell smooth, elliptical, somewhat inflated, inequilateral, obscurely angular on the umbonal slope, and flattened on the side; substance of the shell rather thick, thinner behind; beaks rather prominent; ligament rather short and thin; epidermis yellowish horn colour, striate, shining, and without rays; cardinal teeth very small, single in the right and double in the left valve; lateral teeth rather long and nearly straight, thickened at the posterior end; anterior cicatrices distinct; posterior cicatrices distinct; dorsal cicatrices placed nearly in the centre of the cavity of the beaks; cavity of the shell rather shallow and rounded; cavity of the beaks shallow and rounded; nacre white and iridescent.



7. *Unio tumescens*.
8. *Unio pernodosus*.
9. *Unio flavescens*.

Remarks.—Dr. Budd submitted three specimens of this species to my inspection. They are of various ages, and neither of them have a single ray. The youngest is more yellow than the others. It is nearly allied to *U. simplex*, herein described, but differs from that species in being less heavy, in having no rays, and in being flatter on the side. It answers nearly to the description of Mr. Conrad's *U. Greenii*, but does not agree with his figure, which is more rounded, and has rays.

UNIO FULGIDUS. Pl. IV. Fig. 10.

Testá lævi, triangulari, inflatá; valvulis crassis; natibus magnis elevatisque; epidermide tenebroso-fuscá, politá, radiatá; dentibus cardinalibus parvis; lateralibus crassis rectisque; margaritá albá et iridescente.

Shell smooth, triangular, inflated; valves thick; beaks large and elevated; epidermis dark-brown, polished, rayed; cardinal teeth small; lateral teeth thick and straight; nacre white and iridescent.

Hab. Alexandria, Louisiana. J. Hale, M. D.

My cabinet and cabinets of Dr. Hale and T. G. Lea.

Diam. .8,

Length 1.1,

Breadth 1.2 inches.

Shell smooth, triangular, inflated, subangular on the umbonal slope, nearly equilateral; substance of the shell thick, thinner behind; beaks large and elevated; ligament short and thin; epidermis dark-brown, finely polished, with obscure rays, and regular, equidistant marks of growth; cardinal teeth small, lateral teeth short, thick, and straight; anterior cicatrices distinct; posterior cicatrices distinct; dorsal cicatrices placed nearly in the centre of the cavity of the beaks; cavity of the shell very shallow; cavity of the beaks shallow and subangular. Nacre white and iridescent.

Remarks.—This is a small species of which I received one specimen and an odd valve from my brother, T. G. Lea, who received them from Dr. Hale. This species is allied to *U. tumescens*, (Nobis,) herein described. It differs in being less flattened on the sides, in not having an angular umbonal slope, in having a more fine polish, and in the rays being more obscure.

UNIO SYMMETRICUS. Pl. IV. Fig. 11.

Testá lævi, oblongá, subcompressá; valvulis subcrassis; natibus subprominentibus; epidermide tenebroso-fuscá; dentibus cardinalibus compressis, elevatis, acuminatis; lateralibus longis, lamellatisque; margaritá albá.

Shell smooth, oblong, rather compressed; valves somewhat thick; beaks somewhat prominent; epidermis dark-brown; cardinal teeth compressed, elevated, and pointed; lateral teeth long and lamellar; nacre white.

Hab. Red River, at Alexandria, Louisiana. J. Hale, M. D.

My cabinet and cabinet of Dr. Hale.

Diam. 1.1,

Length 1.8,

Breadth 3.2 inches.

Shell smooth, oblong, rather compressed, angular behind and rounded before, carinate on the posterior slope; substance of the shell rather thick and regular on the interior surface; beaks somewhat prominent; ligament very long and rather thin; epidermis dark-brown, polished on the umbones, and wrinkled along the margin; cardinal teeth compressed, elevated, pointed, single in the right and double in the left valve; lateral teeth long, lamellar, thickened in the left valve and slightly recurved; anterior cicatrices distinct;

posterior cicatrices confluent; dorsal cicatrices numerous, deep, and placed in the centre of the cavity of the beaks; cavity of the shell rather shallow; cavity of the beaks shallow and angular; nacre white.

Remarks.—Three specimens of this species have been recently sent to me by Dr. Hale. It belongs to the group of which Mr. Say's *camptodon* may be considered as the type, and which includes his *declivis* and *tetralasmus*—if the latter be a true species, of which I am unable to decide, never having seen a specimen of it. In all the three specimens before me the outline is remarkably regular and uniform, and very closely resembles the *declivis*, but the angle is less acute. In the three there is no appearance of rays—one of them is inclined to yellow. The margin of the interior surface is rather broad and dark. The two impressed lines, from the beak to the posterior margin which exist in so many species, are rather more marked than usual. A specimen in Dr. Griffith's cabinet, supposed to be Mr. Conrad's *U. excultus*, approaches very closely to this species, and it may prove, when more perfect individuals are found and compared, to be only a variety.

UNIO UNICOLOR. Pl. IV. Fig. 12.

Testâ lævi, subrotundâ, subcompressâ; valvulis crassis; natibus subprominentibus; epidermide fuscâ; dentibus cardinalibus parvis; lateralibus longis subrectisque; margaritâ albâ et iridescente.

Shell smooth, nearly round, rather compressed; valves thick; beaks slightly prominent; epidermis brown; cardinal teeth small; lateral teeth long and nearly straight; nacre white and iridescent.

Hab. Tuscaloosa, Alabama. B. W. Budd, M. D.

Cabinet of Dr. Budd.

Diam. .5,

Length .8,

Breadth 1.1 inches.

Shell smooth, nearly round, rather compressed and somewhat lenticular; substance of the shell thick, thinner behind; beaks but slightly prominent; ligament short and thin; epidermis rather dark-brown, with very fine, shining striæ; cardinal teeth small, single in the right and double in the left valve; lateral teeth long and nearly straight; anterior cicatrices confluent; posterior cicatrices confluent; dorsal cicatrices on the under side of the plate near the cardinal tooth; cavity of the shell rather shallow and regularly rounded; cavity of the beaks small and slightly angular; nacre very white and iridescent.

Remarks.—This is a very small species, with characteristics more nearly resembling *U. lens*, (Nobis,) than any other with which I am acquainted. One specimen only was sent to me by Dr. Budd.

UNIO APPROXIMUS. Pl. V. Fig. 13.

Testâ lævi, ellipticâ, inflatâ; valvulis subcrassis; natibus prominulis; epidermide luteâ, radiatâ; dentibus cardinalibus parvis, acuminatis; lateralibus longis, subrectisque; margaritâ albâ et iridescente.

Shell smooth, elliptical, inflated; valves rather thick; beaks somewhat prominent; epidermis yellow, radiated; cardinal teeth small, pointed; lateral teeth long and nearly straight; nacre white and iridescent.

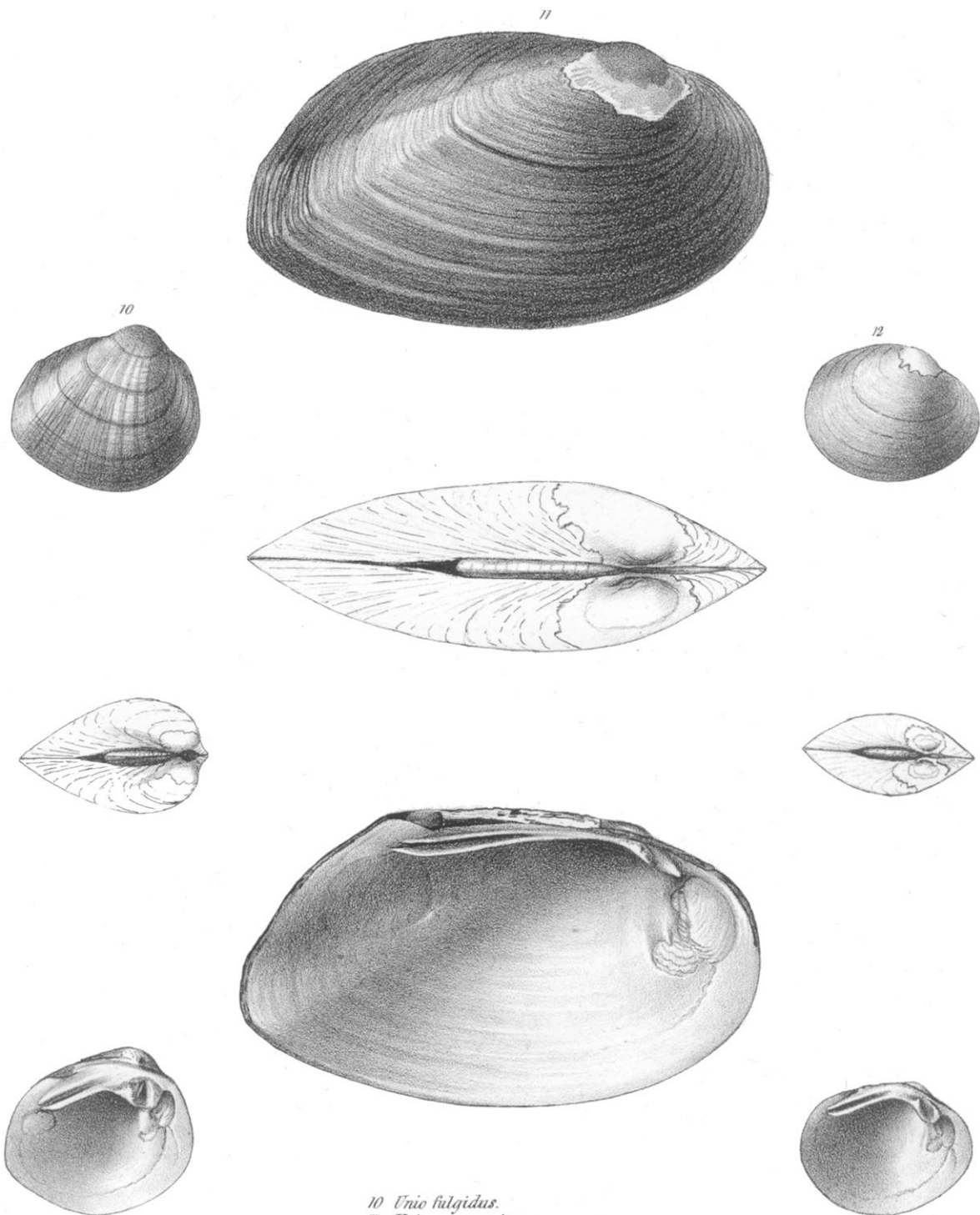
Hab. Red River, at Alexandria, Louisiana. J. Hale, M. D.

My cabinet and cabinet of Dr. Hale.

Diam. .1,

Length 1.3,

Breadth 2.2 inches.



10 *Unio fulgidus*.
 11 *Unio symmetricus*.
 12 *Unio unicolor*.

Shell smooth, elliptical, inflated, rounded before and behind; substance of the shell rather thick; beaks somewhat prominent, nearly terminal; ligament rather long and thin; epidermis yellow, somewhat polished, smooth, with small rays; cardinal teeth double in both valves, erect, pointed; lateral teeth long, nearly straight, lamellar; anterior cicatrices distinct; posterior cicatrices confluent; dorsal cicatrices placed across the centre of the cavity of the beaks; cavity of the shell rather deep and rounded; cavity of the beaks deep and angular.

Remarks.—Dr. Hale has twice sent me this shell, from the Red River, and I have now four specimens before me. I thought when I first received a specimen, some years since, that it was a variety of *Hydiana*, but it differs from that species in being much less ponderous, in the beaks being more terminal, and in being less rayed. These are also smaller. The rays are stronger on the posterior slope. One of the specimens is rayed nearly over the whole disk—another has rays only on the posterior part.

UNIO CAPERATUS. Pl. V. Fig. 14.

Testâ lævi, obliquâ, compressâ; valvulis crassis; natibus elevatis; epidermide rufo-fuscâ; dentibus cardinalibus percrassis; lateralibus longis, à cardinalibus separatis, crassis curvisque; margaritâ albâ.

Shell smooth, oblique, compressed; valves thick; beaks elevated; epidermis reddish-brown; cardinal teeth very thick; lateral teeth long, (being separated from the cardinal teeth,) thick, and curved; nacre white.

Hab. Clinch River, Tennessee. President Estabrook.

My cabinet and cabinets of Mr. Estabrook and Dr. Foreman.

Diam. 1.2, Length 1.9, Breadth 2.5 inches

Shell smooth, oblique, compressed, flattened on the umbones, very inequilateral, surface of the shell thick, thinner behind; beaks elevated; ligament rather long and thick; epidermis reddish-brown, wrinkled, with numerous, irregular, capillary rays; cardinal teeth very thick, large, and disposed to be double in both valves; lateral teeth long, (being separated from the cardinal teeth,) thick, curved, and enlarged at the posterior end; anterior cicatrices distinct; posterior cicatrices distinct; dorsal cicatrices placed under the plate near the cardinal tooth; cavity of the shell shallow; cavity of the beaks deep and angular; nacre white.

Remarks.—I have three specimens of this interesting species before me. They are all mature shells, and a good deal eroded. It belongs to that group of which the *U. irroratus*, (Nobis,) may be considered the type, having the correlative characteristics. It will stand between *irroratus* and *dromas*. From the first it differs in being oblique, and more compressed—from the latter in being smaller, flatter, and not having the humps on the umbones. The capillary rays seem to spread over the whole disk, but the specimens being old and worn, that notable character is nearly obliterated. The colour of the epidermis, in younger specimens, will no doubt be found to be greenish and yellow, and the rays very beautiful, as in the *irroratus*. Two specimens of the three have a tint of salmon-colour in the nacre of the posterior portion. The plate from the beak to the margin, between the cardinal and lateral teeth, is large and flat, and the space between the two teeth very much arched. It is very evident, from the lines of growth, that the young are nearly round, the disk becoming protruded and patulous, when old.

UNIO SIMPLEX. Pl. V. Fig. 15.

Testá lævi, ellipticâ, subinflatâ; valvulis subcrassis; natibus subprominentibus; epidermide luteâ; dentibus cardinalibus parvis; lateralibus longis, crassis subrectisque; margaritâ albâ et iridescente.

Shell smooth, elliptical, somewhat inflated; valves rather thick; beaks somewhat prominent; epidermis yellow; cardinal teeth small; lateral teeth long, thick, and nearly straight; nacre white and iridescent.

Hab Black Warrior River, Alabama. B. W. Budd, M. D.

My cabinet and cabinet of Dr. Budd.

Diam. .7, Length .1, Breadth 1.6 inches.

Shell smooth, elliptical, somewhat inflated, rounded and full on the umbonial slope; substance of the shell rather thick, thinner behind; beaks rather prominent; ligament long and narrow; epidermis yellow, shining, and finely striate, with a few capillary rays on the posterior slope; cardinal teeth very small, single in the right and double in the left valve, crenate; lateral teeth long, thick at the posterior end, and nearly straight; anterior cicatrices distinct; posterior cicatrices distinct; dorsal cicatrices placed on the under side of the cardinal tooth; cavity of the shell rather deep; cavity of the beaks rather shallow and rounded; nacre very white and iridescent.

Remarks.—Two specimens of this species were placed under my notice, by Dr. Budd. It has somewhat the aspect of *U. Hydianus*, (Nobis,) but differs in being less transverse and having a more striate surface, and being without the numerous beautiful rays which so generally prevail in that species. Both the specimens before me have the same capillary rays on the posterior slope, and none whatever on the other portions of the disk. The lateral tooth is remarkable for the thickness on the inferior side of the posterior end.

UNIO GOULDII. Pl. VI. Fig. 16.

Testâ lævi, ellipticâ, subinflatâ, inequilateralî; valvulis subcrassis; natibus prominulis; epidermide tenebrososâ; dentibus cardinalibus parvis, subcrassis; lateralibus longis curvisque; margaritâ subaureâ et valde iridescente.

Shell smooth, elliptical, somewhat inflated, inequilateral; valves rather thick; beaks slightly prominent; epidermis dark-brown; cardinal teeth small and thick; lateral teeth long and curved; nacre somewhat golden and very iridescent.

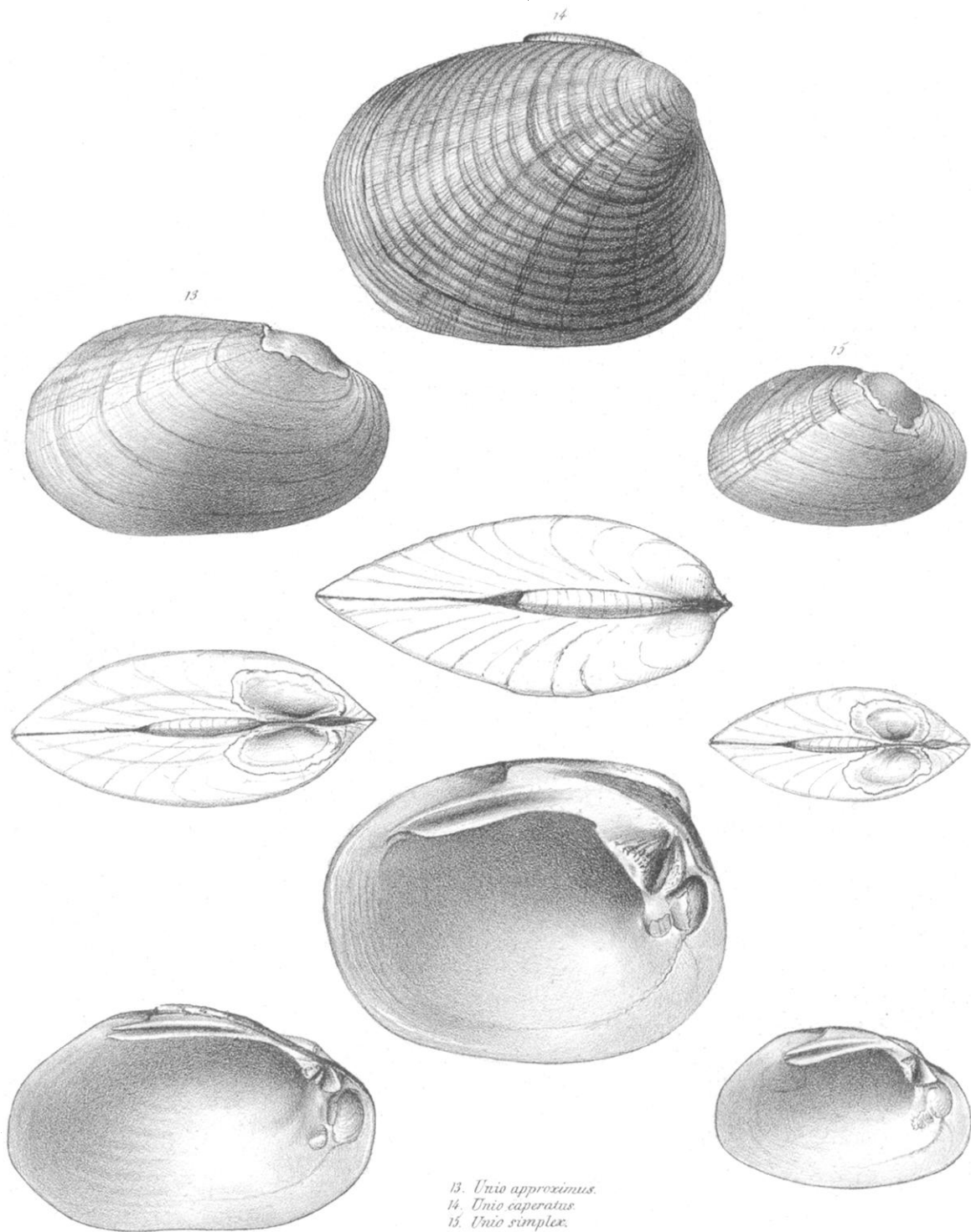
Hab. Tuscaloosa, Alabama. R. E. Griffith, M. D.

Cabinet of R. E. Griffith, M. D.

Diam. .7, Length 1.1, Breadth 1.9 inches.

Shell smooth, elliptical, somewhat inflated, inequilateral, rounded before and obtusely angular behind; substance of the shell rather thick, thinner before; beaks slightly prominent; epidermis dark-brown, without rays; cardinal teeth small and thick, double in both valves; lateral teeth long, curved in the left valve, the superior one considerably shorter than the inferior one; anterior cicatrices distinct; posterior cicatrices confluent; dorsal cicatrices placed on the plate under the cardinal teeth; cavity of the shell rather shallow; cavity of the beak rather shallow and angular; nacre very soft, satin like, somewhat golden, and very iridescent.

Remarks.—A single specimen of this shell only is before me. My attention was called to it by Dr. Griffith. The beaks are so much worn as to prevent this character from



13. *Unio approxinus*.
14. *Unio caperatus*.
15. *Unio simplex*.

Shell smooth, elliptical, much compressed, striated, very inequilateral, rounded before and subbiangular behind, flattened anteriorly to the umbonial slope; substance of the shell rather thin; beaks slightly prominent; ligament rather short and very thin; epidermis dark-brown—almost black, without rays, shining, with distinct marks of growth; cardinal teeth small, compressed, double in both valves; lateral teeth very long, thin, lamellar and rather curved; anterior cicatrices confluent, posterior cicatrices confluent; dorsal cicatrices placed nearly in the centre of the cavity of the beaks; cavity of the shell very shallow; cavity of the beaks very shallow; nacre bluish-white and iridescent.

Remarks.—Dr. Griffith called my attention to a single specimen of this shell in his cabinet. The locality is uncertain, except that it is from some one of the southern states—he thinks Alabama. In general form it resembles a very short, compressed *nasutus*, Say. Like it it is flattened posteriorly, but it differs in its epidermis, and in the form of the cardinal teeth. The umbonial slope is slightly biangular. It has somewhat the aspect of *U. multistriatus*, (Nobis,) but it is a thinner shell. The beaks being eroded, the characters could not be ascertained—but they have the aspect of some of the species from South America.

I name this after Amos Binney, M. D., of Boston, a gentleman who has devoted much time to the development of our terrestrial Mollusca.

UNIO FULIGINOSUS. Pl. VII. Fig. 19.

Testâ lævi, transversâ, subcompressâ; valvulis subcrassis; natibus prominulis; epidermide tenebroso-fuscâ; dentibus cardinalibus parvis; lateralibus longis curvisque; margaritâ vel albâ vel purpureâ.

Shell smooth, transverse, rather compressed; valves rather thick; beaks slightly prominent; epidermis dark-brown; cardinal teeth small; lateral teeth long and curved; nacre white or purple.

Hab. Cobb's Creek, near Philadelphia. R. E. Griffith, M. D.

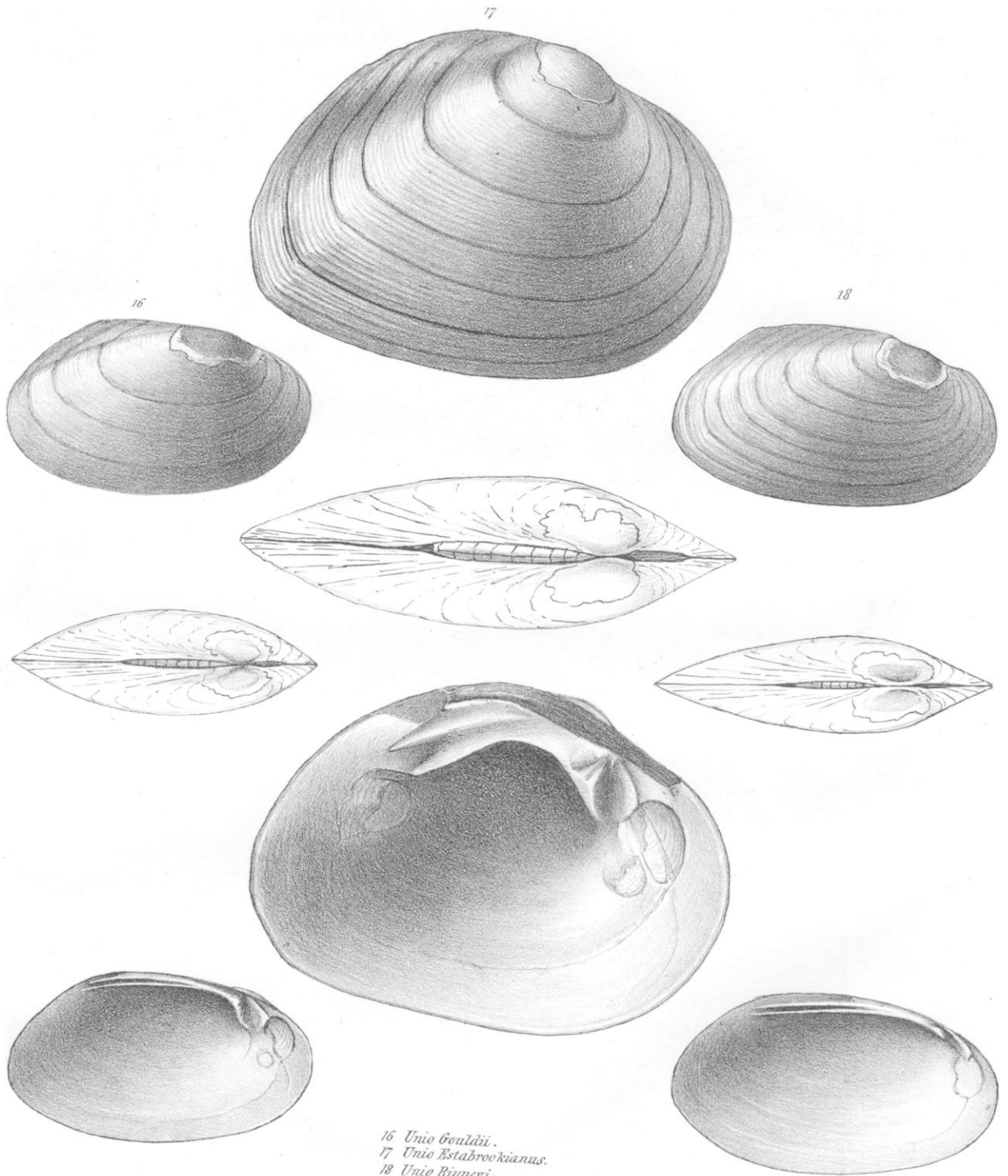
My cabinet and cabinet of Dr. Griffith.

Diam. .7, Length 1.1,

Breadth 2.2 inches.

Shell smooth, transverse, rather compressed, subangular behind, carinate on the posterior dorsal margin; substance of the shell rather thick; beaks slightly prominent; ligament rather long and thin; epidermis dark-brown, smooth, somewhat polished, without rays, with distant distinct lines of growth; cardinal teeth small, pointed, single in the right and double in the left valve; lateral teeth long, curved upward, and thickened at the posterior end; anterior cicatrices distinct; posterior cicatrices distinct; dorsal cicatrices placed nearly in the centre of the cavity of the beaks; cavity of the shell rather shallow and rounded; cavity of the beaks shallow and somewhat angular; nacre white or purple.

Remarks.—It must be considered as quite a remarkable circumstance that a new species of *Unio* should have remained unobserved in the vicinity of Philadelphia, where so many zoologists have been, within the last thirty years, employed in researches. The first individual captured by Dr. Griffith was obtained about six months since, in Cobb's Creek, near La Grange, the country seat of Manuel Eyre, Esq. Subsequently Dr. Griffith found three more specimens, of different ages. All these are before me, and certainly present characters distinct from any species known to that accurate and experienced



16 *Unio Gouldii*.
 17 *Unio Estabrookianus*.
 18 *Unio Bameyi*.

From Nature on Stone by French.

Sinclair's, Lith Phil.

naturalist, Dr. Griffith, or myself. By an inexperienced eye it might be considered as an aberrant form of *U. complanatus*, but in outline it is really more like *Margaritana margaritifera*. It differs from *complanatus* in being more transverse, in being without rays, in the remarkable lines of growth, and in its teeth. The lateral tooth enlarges suddenly from the small plate near the cardinal tooth and curves upwards; in the left valve the inferior portion of the lateral tooth is very much thickened. Two of the specimens before me are perfectly white—one is tinged with purple on the posterior portion—the fourth is purple over the whole nacre.

UNIO PALLESCENS. Pl. VII. Fig. 20.

Testâ lævi, ellipticâ, valdè inflatâ; valvulis subcrassis; natibus subprominentibus; epidermide pallido-luteâ; dentibus cardinalibus magnis, compressis erectisque; lateralibus longis curvisque; margaritâ albâ.

Shell smooth, elliptical, much inflated; valves rather thick; beaks slightly prominent; epidermis pale-yellow; cardinal teeth large, compressed and erect; lateral teeth long and curved; nacre white.

Hab. Tuscaloosa, Alabama. B. W. Budd, M. D.

Cabinet of Dr. Budd.

Diam. 1.4, Length .2, Breadth 3.1 inches.

Shell smooth, elliptical, much inflated: substance of the shell rather thick; beaks slightly prominent; ligament long and large; epidermis pale-yellow colour, striate and somewhat shining, apparently without rays; cardinal teeth large, compressed, elevated, pointed and double in both valves; lateral teeth long, lamellar, and curved; anterior cicatrices distinct; posterior cicatrices distinct; dorsal cicatrices placed across the cavity of the beaks; cavity of the shell deep and large; cavity of the beaks small and rounded; nacre silvery-white and iridescent.

Remarks.—A single and not very perfect specimen of this species is before me. It seems to be allied, on one side, to *U. luteolus*, Lam., and, on the other, to *U. stramineus*, Conrad. A large portion of the disks being eroded from the beaks downwards, the characters of the younger growths cannot be observed. Its teeth are very much like those of *luteolus*, but I do not think this specimen could, with propriety be considered to belong to that species.

UNIO CALIGINOSUS. Pl. VII. Fig. 21.

Testâ lævi, ellipticâ, subcompressâ; valvulis subtenuibus; natibus prominulis, ad apicem undulatis; epidermide tenebroso-fuscâ; dentibus cardinalibus compressis, elevatis; lateralibus longis subcurvisque; margaritâ albâ et iridescente.

Shell smooth, elliptical, rather compressed; valves rather thin; beaks somewhat prominent, undulated at the beaks; epidermis dark-brown; cardinal teeth compressed, elevated; lateral teeth long and somewhat curved; nacre white and iridescent.

Hab. Red River, at Alexandria, Louisiana. J. Hale, M. D.

My cabinet and cabinet of Dr. Hale.

Diam. .8, Length 1.2, Breadth 2.2 inches.

Shell smooth, elliptical, rather compressed, obtusely angular behind; substance of the shell rather thin, slightly thickened before; beaks somewhat prominent and minutely un-

dulated at the tip; ligament rather long and thin; epidermis very dark-brown, somewhat wrinkled, and scarcely showing the lines of growth; cardinal teeth compressed, single in the right and double in the left valve, elevated, slightly crenulate, the anterior being the most elevated; lateral teeth long and somewhat curved; anterior cicatrix distinct; posterior cicatrix confluent; dorsal cicatrices placed in the centre of the cavity of the beaks; cavity of the shell rather shallow; cavity of the beaks shallow and angular; nacre white and iridescent.

Remarks.—Five female and three male adults, with two young shells of this species were received from Dr. Hale, at different times. The females are a good deal enlarged over the posterior slope, and spread out on the posterior basal margin. It seems to be nearly allied to *Nashvillianus*, Nobis, and to *Haleianus*, Nobis. It is not so large or pearly a nacre as the latter, nor does it seem to grow quite so large as the former. In the beaks it also differs from it. In some of the old specimens indistinct rays may be observed through the very dark surface. In the two young shells rays may be observed on the whole disk. The undulations of the beaks are small and very closely set.

UNIO SPATULATUS. Pl. VIII. Fig. 22.

Testâ lævi, ellipticâ, compressâ; valvulis subtenuibus; natibus vix prominulis, ad apicem undulatis; epidermide luteâ, valdè radiatâ; dentibus cardinalibus parvis; lateralibus longis rectisque; margaritâ albâ et iridescente.

Shell smooth, elliptical, compressed; valves rather thin; beaks slightly prominent and undulated at the beak; epidermis yellowish, with numerous rays; cardinal teeth small; lateral teeth long and straight; nacre white and iridescent.

Hab. Rock River, Wisconsin. Captain Maryatt and B. W. Budd, M. D.

My cabinet and cabinet of Dr. Budd.

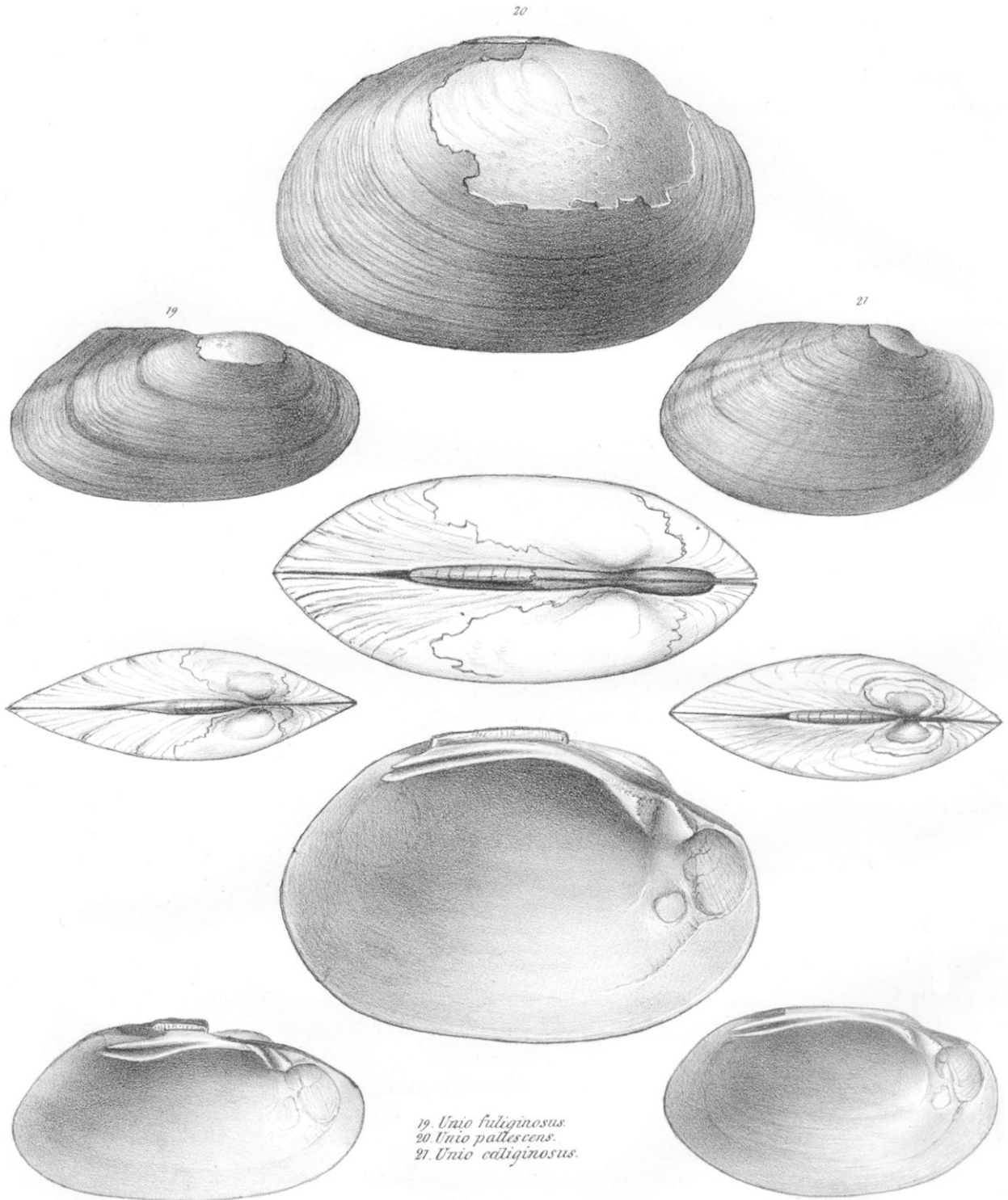
Diam. .6,

Length .9,

Breadth 1.5 inches.

Shell smooth, elliptical, compressed, very inequilateral; substance of the shell rather thin; beaks but slightly prominent and minutely undulate at the tips; ligament long and thin; epidermis yellowish, with numerous green rays nearly over the whole disk; cardinal teeth very small and pointed, double in the left and single in the right valve; lateral teeth long and straight; anterior cicatrices distinct; posterior cicatrices confluent; dorsal cicatrices placed in the centre of the cavity of the beaks; cavity of the shell shallow; cavity of the beaks shallow and angular; nacre white.

Remarks.—Many years since Captain Maryatt sent me a box of shells from Wisconsin, in which there was a single imperfect specimen of this species. Although pretty well convinced that it was new and undescribed, I delayed inserting it in my former paper, in the hope of getting better specimens. Dr. Budd has submitted to my examination two perfect specimens, neither being eroded even on the beaks, which are finely undulated. It has some resemblance to *U. iris*, Nobis, but is a shorter and a more ponderous shell. It also bears some resemblance to the young of *U. crassus*, Say, and to *U. ellipsiformis*, Conrad, but differs from the latter in the form of the cardinal tooth, and in the beaks, which Mr. Conrad describes as *simple*, while in the *spatulatus* they are *undulate*.



UNIO COMPRESSISSIMUS. Pl. VIII. Fig. 23.

Testâ lævi, subtriangulari, valdè compressâ; valvulis crassis; natibus compressis; dentibus cardinalibus parvis, crenulatis; lateralibus magnis, crassis curvisque; margaritâ albâ.

Shell smooth, subtriangular, very much compressed; valves thick; beaks compressed; cardinal teeth very small, crenulate; lateral teeth large, thick, and curved; nacre white.

Hab. Holston River, Tennessee. President Estabrook.

My cabinet and cabinets of Mr. Estabrook and Dr. Griffith.

Diam. .8, Length 1.6, Breadth 2.6 inches.

Shell smooth, subtriangular, very much compressed, sub-arcuate at base, and angular behind; substance of the shell very thick, very irregular on the interior surface, thick before and thinner behind; beaks very much compressed and slightly prominent; ligament long and large; cardinal teeth very remarkably small, crenulate, single in the right and double in the left valve; lateral teeth very large, thick, and curved; anterior cicatrices distinct; posterior cicatrices distinct; dorsal cicatrices placed along the edge of the plain over the cavity of the beaks; cavity of the shell exceedingly shallow; cavity of the beaks very shallow and subangular; nacre white.

Remarks.—This is a very remarkable species, being more compressed than any *Unio* which has come under my notice. Both the specimens before me are unfortunately without any epidermis, except along the basal margin, and there too much injured to display any character. Although so completely eroded over the whole exterior surface, they were taken alive, and the interior is fresh. The cavity of the shell being very small, the included soft parts must have been unusually small. The interior aspect of the shell is peculiar, the surface of the nacre being very irregular, almost varicose. In each of the four valves before me there is an impressed line running from the inner side of the great posterior cicatrix up to the cavity of the beak. The form, in younger and more perfect specimens, will, I presume, be found to be more elliptical. It is likely that this species prefers a gravelly bottom and rapid current. It is most nearly allied to *U. phaseolus*, Hild.

UNIO PULVINULUS. Pl. VIII. Fig. 24.

Testâ lævi, ellipticâ, inflatâ; valvulis crassis; natibus prominentibus; epidermide tenebroso-fuscâ; dentibus cardinalibus minutissimis; lateralibus brevis rectisque; margaritâ albâ et iridescente.

Shell smooth, elliptical, inflated; valves thick; beaks prominent; epidermis dark-brown; cardinal teeth very small; lateral teeth short and straight; nacre white and iridescent.

Hab. Tuscaloosa and Coosawattee River, Murray County, Alab. B. W. Budd, M. D.

My cabinet and cabinets of Dr. Budd and Dr. Griffith.

Diam. .6, Length .9, Breadth 1.2 inches.

Shell smooth, elliptical, inflated, obtusely angular on the umbonial slope and slightly flattened on the sides, inequilateral; substance of the shell thick before and thin behind; beaks rather prominent and full; ligament very short and thin; epidermis dark-brown, smooth, shining and without rays; cardinal teeth very small, erect and pointed, single in the right and double in the left valve; lateral teeth short and straight; anterior cicatrices

confluent; posterior cicatrices distinct; dorsal cicatrices placed on the under side of the plate near the cardinal tooth; cavity of the shell deep and rounded; cavity of the beaks very shallow and rounded; nacre pearly white and very iridescent.

Remarks.—A single specimen only of this small species was procured by Dr. Budd. It is nearly allied to *U. castaneus*, Nobis, but may be easily distinguished from it by its not being oblique, and in having the umbonial slope angular. The cardinal teeth are also very much smaller.

ANODONTA TETRAGONA. Pl. VIII. Fig. 25.

Testâ lævi, oblongâ, valdè inflatâ; valvulis tenuibus; natibus prominulis; epidermide luteo-fuscâ, radiatâ; margaritâ cœruleo-albâ et iridescente.

Shell smooth, oblong, much inflated; valves thin; beaks somewhat prominent; epidermis yellowish-brown, rayed; nacre bluish-white and iridescent.

Hab. Alexandria, Louisiana. J. Hale, M. D.

My cabinet and cabinet of Dr. Hale.

Diam. 1.00,

Length 1.4,

Breadth 2.2 inches.

Shell smooth, oblong, very much inflated, subangular on the umbonial slope, inequilateral, incurved on the dorsal margin, angular behind; substance of the shell very thin; beaks somewhat prominent; ligament rather long and thin; epidermis yellowish-brown, with numerous indistinct rays; anterior cicatrices confluent; posterior cicatrices confluent; dorsal cicatrices immediately over the centre of the cavity of the beaks; cavity of the shell deep and rounded; cavity of the beak rather deep and angular; nacre bluish-white.

Remarks.—Among the shells sent to me by Dr. Hale, was a single specimen of this species, which, though nearly allied to Mr. Say's *edentula*, may be easily distinguished by its angular umbonial slope. The rudiments of a cardinal tooth are quite as prominent, if not more so, than in the *edentula*, which, when described by Mr. Say, he considered to belong to his genus *Alasmodonta*. The lines of growth in *tetragona* are distinct and distant, and the basal margin in the interior is somewhat rubiginose.

MARGARITANA MINOR. Pl. VIII. Fig. 26.

Testâ lævi, triangulari, compressâ; valvulis tenuibus; natibus prominulis, ad apices undulatis; epidermide virido-luteâ; dentibus cardinalibus parvis; margaritâ cœruleo-albâ et iridescente.

Shell smooth, triangular, compressed; valves thin; beaks slightly prominent, undulated at the beaks; cardinal teeth small; nacre bluish-white and iridescent.

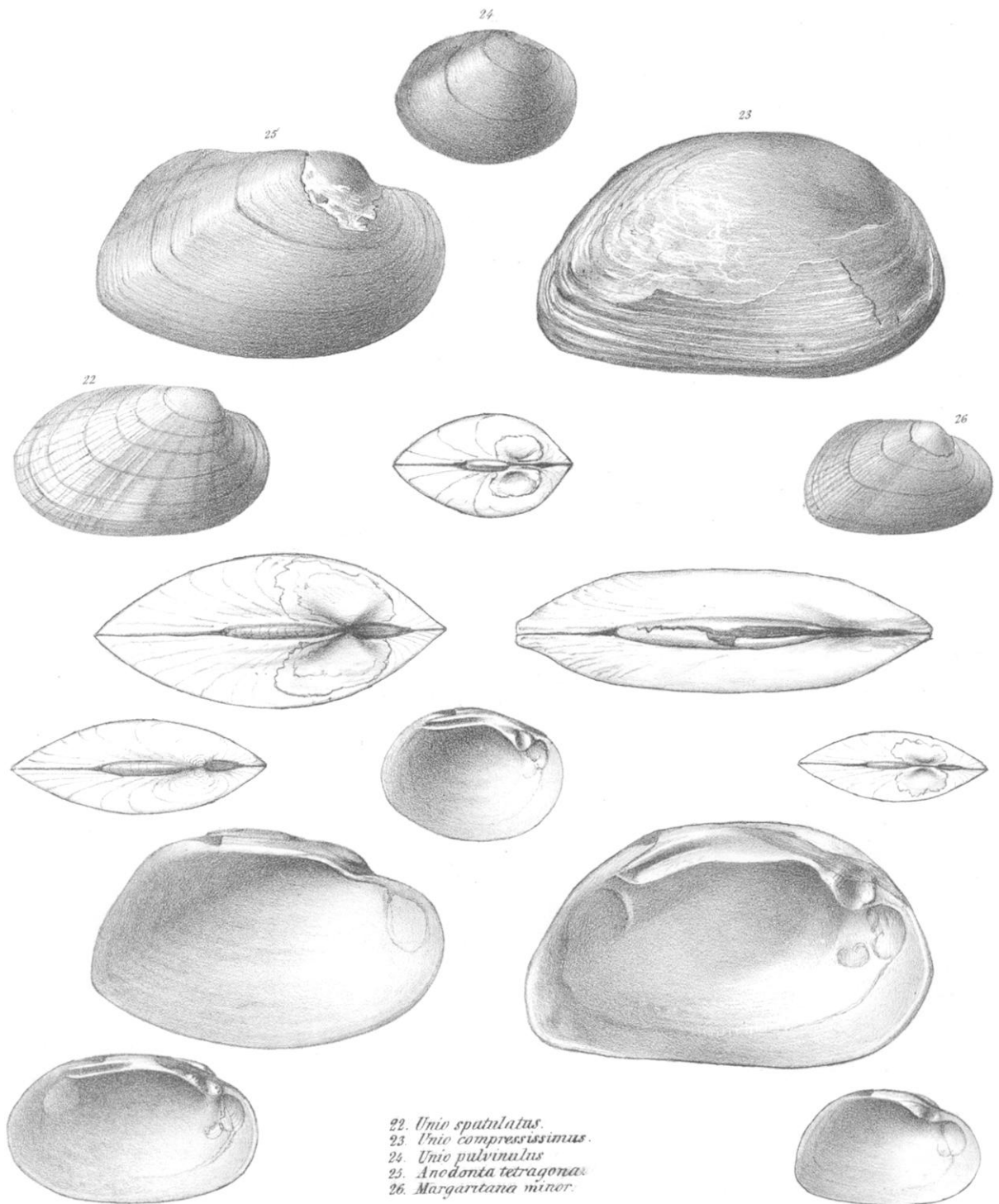
Hab. Tennessee—S. M. Edgar, M. D. North Carolina—B. W. Budd, M. D.

Diam. .5,

Length .7,

Breadth 1.2 inches.

Shell smooth, triangular, compressed, obtusely angular on the umbonial slope and flattened on the side, inequilateral; substance of the shell very thin and somewhat transparent, thicker before than behind; beaks slightly prominent and minutely undulate at the tips; ligament very short and very thin; epidermis greenish-yellow, greener on the posterior portion, with minute striæ; cardinal teeth very small and somewhat pointed;



anterior cicatrices confluent; posterior cicatrices confluent; dorsal cicatrices placed nearly in the centre of the cavity of the beaks; cavity of the shell very shallow; cavity of the beaks rather shallow and angular; nacre bluish-white and iridescent.

Remarks.—A single specimen of this shell was sent to me many years since, by Dr. Edgar, with many other species. As it was, however, evidently not a mature shell, I hesitated about describing it, although I was well convinced of its being new. Two specimens submitted to me by Dr. Budd, proved to be unquestionably the same, and one, which seems to be mature, has answered for this description. They are no doubt from that part of North Carolina where the streams flow into the Tennessee River.

This species is a very small one, and is allied to *M. deltoidea*, Nobis, but it is a thinner, lighter shell, and smaller. Two of the specimens before me have the posterior portion of the shell greenish, which colour is caused by minute, indistinct rays, which can be distinguished by close examination.

MELANIA SOLIDA. Pl. IX. Fig. 27.

Testá lævi, obtuso-conicâ, crassâ, solidâ, tenebroso-corneâ; spirâ subbrevis; suturis valdè impressis; anfractibus convexis; aperturâ parvâ, rhomboideâ, ad basim contortâ, intus albâ; columellâ inflectâ.

Shell smooth, obtusely conical, thick, solid, dark horn-colour; spire rather short; sutures much impressed; whorls convex; aperture small, rhomboidal, twisted at the base, white within; columella inflected.

Hab. Tennessee. E. Foreman, M. D.

My cabinet and cabinet of Dr. Foreman.

Diam. .5,

Length .9 of an inch.

Remarks.—This species in form somewhat resembles *M. alveare*, Con., on one side, and *M. canaliculata*, Say, on the other. It has not, however, either furrows or tubercles. The three specimens before me have all mutilated apices, and therefore the number of whorls cannot be correctly ascertained. There may be seven or eight. The aperture is about one-third the length of the shell. There is no appearance of bands in these. This is one of those species which have a twisted aperture, being auger-shaped, the outer lip being spread out, and the edge having a line of double curvature. The columella is very much twisted.

MELANIA PROTEUS. Pl. IX. Fig. 28.

Testâ lævi, subcylindrâ, crassâ, pupæforme, luteo-corneâ; spirâ elevatâ; suturis impressis; anfractibus septenis, subconvexis; aperturâ parvâ, rhomboideâ, ad basim angulatâ, intus albidâ.

Shell smooth, subcylindrical, thick, pupæform, yellowish horn-colour; spire elevated; sutures impressed; aperture small, rhomboidal, angular at the base, within whitish.

Hab. Tuscaloosa, Alabama. B. W. Budd, M. D.

My cabinet and cabinet of Dr. Budd.

Diam. .5,

Length 1 inch.

Remarks.—There were six specimens submitted to me by Dr. Budd, which I refer to the one species, although they present considerable difference. Five of the specimens are dead and bleached shells, and are of a light yellow or buff colour. The sixth is a fresh

and perfect specimen, with four small purple bands and a tuberculous shoulder, the tubercles being prolonged nearly into folds. Two others are indistinctly banded. Another has a tuberculous shoulder, and is disposed to be granulate. From these varieties arises the name given to it. The aperture is rather contracted, and about two-fifths the length of the shell.

MELANIA LUGUBRIS. Pl. IX. Fig. 29.

Testá lævi, subacuto-conoideá, subcrassá, tenebroso-fuscá; spirá subelevatá; suturis latè impressis; anfractibus planulatis; aperturá parvâ, rhomboideá, intus cæruleá, infernè angulatá.

Shell smooth, rather acutely conical, rather thick, dark-brown; spire rather elevated; sutures widely impressed; whorls flattened; aperture small, rhomboidal, within bluish, angular below.

Hab. Alabama. Major Le Conte.

Cabinet of Major Le Conte.

Diam. .37,

Length .85 of an inch.

Remarks.—A single specimen only of this species was received by Major Le Conte. There are no strong characters to separate it, but it is certainly different from any with which I am acquainted. Like the *canaliculata*, Say, it is auger-shaped on the right lip, but it is a much smaller shell, and without the sulcations of that species. There is an angle in the middle of the whorl which causes the sutures to be rather wide and marked. The apex being eroded, the number of whorls cannot be ascertained—probably eight. The aperture is about one-third the length of the shell.

MELANIA TORTA. Pl. IX. Fig. 30.

Testá lævi, claviformi, subcrassá, tenebroso-fuscá; spirá obtusá; suturis impressis; anfractibus convexis; aperturá grande, ellipticá; columellâ tortâ.

Shell smooth, club-shaped, rather thick, dark-brown; spire obtuse; sutures impressed; whorls convex; aperture large, elliptical; columella twisted.

Hab. Big Creek, Laurence County, Tennessee. J. Clark.

My cabinet and cabinets of J. Clark and T. G. Lea.

Diam. .36,

Length .73 of an inch.

Remarks.—There were eight specimens of this species submitted to my examination by Mr. Clark, of Cincinnati. In general outline and size it very closely resembles *M. Wardeniana*, (Nobis,) but differs from the specimens of that species which have come under my notice, in not being carinate, and in having a more twisted columella. The apices of the individuals now before me are slightly eroded, and the number of whorls may be seven or eight. One of the specimens has small folds near the apex, with decussating striæ. The inside is bluish-white—one of the specimens having a brown mark at the columella. The aperture is nearly one-half the length of the shell. Over the whole surface there are small, irregular ridges. The body whorl is very long.

MELANIA SPURCA. Pl. IX. Fig. 31.

Testâ lævi, pyramidatâ, subcrassâ, tenebroso-fuscâ; spirâ subelevatâ; suturis subimpressis; anfractibus octonis, planulatis; aperturâ parvâ, rhomboideâ, ad basim angulatâ, intus albidâ.

Shell smooth, pyramidal, somewhat thick, dark-brown; spire somewhat elevated; sutures slightly impressed; whorls eight, flattened; aperture small, rhomboidal, angular at the base, within white.

Hab. Alabama. Major Le Conte.

Cabinet of Major Le Conte.

Diam. .43,

Length .98 of an inch.

Remarks.—This species, of which only a single one was received by Major Le Conte, has no striking character, but cannot be placed with any other with which I am acquainted. It is very regular in its form, with a patulous, auger-shaped, outer lip, the margin of which is quite sinuous. The aperture is nearly one-third the length of the shell. It more nearly resembles *M. regularis*, (Nobis,) than any other species, but is not so large or solid a shell.

MELANIA ABRUPTA. Pl. IX. Fig. 32.

Testâ lævi, abbreviato-conoideâ, subcrassâ, luteâ; spirâ abbreviatâ; suturis linearibus; anfractibus septenis, planulatis; aperturâ magnâ, ovatâ, intus albidâ.

Shell smooth, short-conical, rather thick, yellowish; spire very short; sutures linear; whorls seven, flattened; aperture large, ovate, within whitish.

Hab. Alabama. Major Le Conte.

My cabinet and cabinet of Major Le Conte.

Diam. .3,

Length .64 of an inch.

Remarks.—This species in size and form is somewhat allied to *M. Nickliniana*, (Nobis,) but has the spire more elevated, and is not reddish. The two specimens before me have each two purple bands. This character may be frequent without being constant. The aperture is nearly half the length of the shell.

MELANIA BASALIS. Pl. IX. Fig. 33.

Testâ lævi, ellipticâ, subcrassâ, luteo-viridi, fasciatâ; spirâ curtâ, obtusâ; suturis impressis; anfractibus convexis; aperturâ ovato-elongatâ, ad basim acuto-angulatâ, intus albidâ.

Shell smooth, elliptical, rather thick, yellowish-green, banded; spire short, obtuse; sutures impressed; whorls convex; aperture ovately elongate, at the base acutely angular, within whitish.

Hab. Alabama. Major Le Conte.

My cabinet and cabinet of Major Le Conte.

Diam. .43,

Length .83 of an inch.

Remarks.—The elliptical form of this species is very remarkable. The spire is very short and obtuse. The apex of each of the two specimens before me is eroded, two whorls only being perfect. It has numerous purple bands, and the aperture is rather more than half the length of the shell. The base of the shell is extended and slightly retuse. One of the specimens, near to the superior part of the whorl, is disposed to swell into large tubercles. The epidermis is very smooth and polished.

MELANIA MODESTA. Pl. IX. Fig. 34.

Testâ lævi, conoideâ, subfusiformi, subtenui, nigrâ; spirâ subelevatâ; suturis linearibus; anfractibus planulatis, ultimo in medio angulato; aperturâ ellipticâ, subgrandi, intus tenebrosâ.

Shell smooth, conical, somewhat fusiform, rather thin, black; spire rather elevated; sutures linear; whorls flattened, the last angular in the middle; aperture elliptical, rather large, within dark.

Hab. Chatahoochee River, at Columbus, Georgia. S. Boykin, M. D.

My cabinet.

Diam. .28,

Length .67 of an inch.

Remarks.—A single specimen of this species came from Dr. Boykin, with some others, which I published some years since. This one was deferred in the hopes of getting more for comparison. In outline and colour it is very closely allied to a shell I described, from Tennessee, under the name of *tenebrosa*. It differs from it in having the aperture less distended, in having an angle on the middle of the whorl, and in being more fusiform. The apex being eroded, the number of whorls cannot be ascertained—there are about seven. The aperture is nearly one-half the length of the shell. The bands are so broad and dark as to give, in this specimen, a black appearance to the whole shell, except at the termination of the whorl, where the outer lip is yellow.

MELANIA HALEIANA. Pl. IX. Fig. 35.

Testâ lævi, acuto-conoideâ, subtenui, luteo-corneâ, politâ; spirâ elevatâ; suturis impressis; anfractibus novenis, convexis; aperturâ parvâ, ovatâ, ad basim subangulatâ, intus albidâ.

Shell smooth, acutely conical, rather thin, yellowish horn-colour, polished; spire elevated; sutures impressed; whorls nine, convex; aperture small, ovate, at the base angular, within whitish.

Hab. Alexandria, Louisiana. J. Hale, M. D.

My cabinet and cabinet of Dr. Hale.

Diam. .17,

Length .64 of an inch.

Remarks.—Among some fifty specimens of small *Melaniæ* sent by Dr. Hale, I found three species, nearly the whole, however, being of the above described. It has no very distinctive character, but cannot be placed with any species with which I am acquainted. It resembles some of the young varieties of *M. Virginica*, Say, but has the whorls more convex, and the aperture smaller. Four or five specimens are banded, and these have uniformly two bands, the inferior one being larger and much more distinctly marked. The first few whorls of the apex are carinate. The aperture is about one-fourth the length of the shell.

MELANIA PUMILA. Pl. IX. Fig. 36.

Testâ lævi, obtuso-conoideâ, subcrassâ, tenebroso-corneâ; spirâ depressâ; suturis valdè impressis; anfractibus subconvexis; aperturâ elongatâ, contractâ, ad basim contortâ, intus albidâ.

Shell smooth, obtusely conical; rather thick, dark horn-colour; spire depressed; sutures much impressed; whorls slightly convex; aperture elongate, contracted, twisted at the base, within whitish.

Hab. Tuscaloosa, Alabama. B. W. Budd, M. D.

My cabinet and cabinet of Dr. Budd.

Diam. .27,

Length .53 of an inch.

Remarks.—The two specimens before me are, in form and size, the same. They differ in one having two broad, purple bands, and the other being entirely without. On the inferior part of the whorl one has five rather distinct striæ, the other has these less distinct. The apex of each of these is eroded, and therefore the number of the whorls cannot be ascertained. This species is closely allied to *M. alveare*, Conrad, but is a much smaller shell, and in the two individuals before me there is no appearance of the tubercles which usually exist on the carina of the lower whorl of that species.

MELANIA ALEXANDRENSIS. Pl. IX. Fig. 37.

Testâ lævi, subacuto-conoideâ, subtenui, tenebroso-corneâ; spirâ subelevatâ; suturis subimpressis; anfractibus subplanulatis; aperturâ parvâ, subtrapezoideâ, intus albidâ.

Shell smooth, rather acutely conical, rather thin, dark horn-colour; spire rather elevated; sutures somewhat impressed; whorls rather flattened; aperture small and somewhat trapezoidal; within whitish.

Hab. Alexandria, Louisiana. J. Hale, M. D.

My cabinet and cabinet of Dr. Hale.

Diam. .22,

Length .58 of an inch.

Remarks.—There were two only of this species which came from Dr. Hale. It closely resembles the *Haleiana*, herein described, but has a less elevated spire, and the aperture differs, in being somewhat auger-shaped, the outer lip being more sinuous. The apex of each being broken, the number of whorls cannot be ascertained. The aperture is rather more than a fourth of the length of the shell.

MELANIA OVOIDEA. Pl. IX. Fig. 38.

Testâ lævi, ellipticâ, subcrassâ, corneâ; spirâ brevi; suturis vix impressis; anfractibus senis, subconvexis; aperturâ magnâ, subovatâ, intus albidâ.

Shell smooth, elliptical, rather thick, horn-colour; spire short; sutures slightly impressed; whorls six, slightly convex; aperture large, nearly ovate, within white.

Hab. Alexandria, Louisiana. J. Hale, M. D.

My cabinet and cabinet of Dr. Hale.

Diam. .2,

Length .44 of an inch.

Remarks.—A single specimen only of this little species was found among the shells sent by Dr. Hale. It differs entirely from the other two species, and approaches Mr. Say's *depygis*, but is smaller, and has a proportionately larger aperture. The aperture is quite one-half the length of the shell. The columella is somewhat thickened on the superior portion. In the specimen before me there are two broad, rather indistinct brown bands.

MELANIA AURICULÆFORMIS. Pl. IX. Fig. 39.

Testâ lævi, ellipticâ, subtenui, luteâ; spirâ depressâ; suturis impressis; anfractibus senis, subconvexis; aperturâ elongatâ, contractâ, ad basim rotundatâ, intus albidâ.

Shell smooth, elliptical, rather thin, yellow; spire depressed; sutures impressed; whorls six, slightly convex; aperture elongate, contracted, at the base rounded, within whitish.

Hab. Tuscaloosa, Alabama. B. W. Budd, M. D.

Cabinet of Dr. Budd.

Diam. .24,

Length .45 of an inch.

Remarks.—This species has very much the aspect of an *Auricula*. It is a very regularly formed and pretty shell, with a smooth, yellow, polished, epidermis. The aperture is about two-thirds the length of the shell, regularly rounded below and angular above, where there is a good deal of nacreous matter deposited.

MELANIA CARINO-COSTATA. Pl. IX. Fig. 40.

Testâ plicatâ, carinatâ, conoideâ, subtenui, vel luteâ vel castaneâ; spirâ subelevatâ; suturis sulcatis; anfractibus planulatis; aperturâ parvâ, ellipticâ; columellâ lævi.

Shell plicate, carinate, conical, rather thin, yellow or chestnut-coloured; spire somewhat elevated; sutures sulcate; whorls flattened; aperture small, elliptical; columella smooth.

Hab. Alabama—Major Le Conte. Tennessee—B. W. Budd, M. D.

My cabinet and cabinets of Major Le Conte and Dr. Budd.

Diam. .36,

Length .98 of an inch.

Remarks.—This is a species not easily confounded with any other known to me. The character of the ribs or folds is peculiar; they being arrested near the sutures by an abrupt carina, which has a smaller parallel one between it. The folds and the carinæ are conspicuous, being perfectly pronounced. Two of the six specimens before me are of a dark chestnut-brown, with the nacre of the interior quite rufous. One is more horn-coloured, having four bands, and the nacre whitish. The three others, all from Dr. Budd, are wax-yellow, the ribs less expressed, and the interior yellowish. The apex of each being broken, the number of whorls cannot be determined—I should think there were about eight. The inferior part of the whorl is smooth. The aperture is rather more than one-third the length of the shell.

MELANIA FILUM. Pl. IX. Fig. 41.

Testâ carinatâ, conoideâ, subtenui, tenebroso-corneâ; spirâ elevatâ; suturis impressis; anfractibus planulatis, in medio carinatis; aperturâ parvâ, rhomboideâ, ad basim angulatâ, intus albidâ; columellâ tortâ.

Shell carinate, conical, rather thin, dark horn-colour; spire elevated; sutures impressed; whorls flattened, carinate in the middle; aperture small, rhomboidal, angular at the base, within whitish, columella twisted.

Hab. Alabama. Major Le Conte.

Cabinet of Major Le Conte.

Diam. .47,

Length 1.06 inches.

Remarks.—A single specimen only of this species was submitted to me by Major Le Conte. It is very nearly allied to *M. elevata*, Say, but may be distinguished by its thread-like carina on the middle of the whorls, which, on the superior ones, presents a mere simple line. The outer lip is remarkably patulous, presenting the auger-shaped lip which belongs to a certain group of the *Melaniæ*. The apex being imperfect, the number of whorls cannot be ascertained. There are eight visible on this specimen, and it probably possesses ten in a perfect state. The aperture is about one-third the length of the shell.

MELANIA SPINALIS. Pl. IX. Fig. 42.

Testâ carinatâ, acuto-conoideâ, subtenui, luteâ, bifasciatâ; spirâ elevatâ; suturis exaratis; anfractibus planulatis; aperturâ parvâ, ovatâ, ad basim angulatâ, intus albidâ.

Shell carinate, acutely conical, rather thin, yellow, double-banded; spire elevated; sutures ploughed out; whorls flattened; aperture small, ovate, angular at the base, white within.

Hab. Alabama. Major Le Conte.

Cabinet of Major Le Conte.

Diam. .33,

Length .96 of an inch.

Remarks.—A single specimen only was submitted to me, and this not very perfect. It is a peculiar shell in its general appearance. The colour being of an unusually bright yellow, with two broad, distinct bands, one immediately above the middle of the whorl and the other below. The superior part of the whorl is darker than that below. The number of whorls cannot be given, the apex being broken. There were probably nine or ten. The aperture is about one quarter the length of the shell.

MELANIA PALLESCENS. Pl. IX. Fig. 43.

Testâ carinatâ, subacuto-conoideâ, subtenui, luteâ; spirâ subelevatâ; suturis impressis; anfractibus novenis, subconvexis; aperturâ parvâ, ovatâ, ad basim angulatâ, intus albidâ.

Shell carinate, rather acutely conical, somewhat thin, yellow; spire somewhat elevated; sutures impressed; whorls nine, rather convex; aperture small, ovate, angular at the base, within whitish.

Hab. Chester District, South Carolina. Professor Vanuxem.

My cabinet and cabinets of Professor Vanuxem and Major Le Conte.

Diam. 34,

Length .87 of an inch.

Remarks.—Many years since, my friend Professor Vanuxem gave me several specimens of this shell. Until recently, I was not satisfied that it was not merely a variety of *semicarinata*, Say, but I am disposed to think it differs too much to be considered merely a variety. It is a larger shell, with more whorls and more distinct carinations. The colour also differs, in being much lighter. A single specimen was among the shells sent from Major Le Conte, which, I suspect, is from Georgia, the locality not being certain. Those from Professor Vanuxem are from Major Green's farm. The aperture is less than one-third the length of the shell. All the specimens are without bands but one, which has four large, distinct ones.

MELANIA BUDDI. Pl. IX. Fig. 44.

Testâ striatâ, cylindræâ, subtenui, corneâ; spirâ attenuatâ; suturis impressis; anfractibus planulatis; aperturâ parvâ, ellipticâ, intus albidâ.

Shell striate, cylindrical, rather thin, horn-colour; spire attenuated; sutures impressed; whorls flattened; aperture small, elliptical, within whitish.

Hab. Tennessee? B. W. Budd, M. D.

My cabinet and cabinet of Dr. Budd.

Diam. .32,

Length 1.07 inches.

Remarks.—I have two specimens before me, both of which have seventeen revolving striæ on the lower whorl. They have also a single small band immediately below the middle of the body whorl, which is hidden on the superior whorls. Each of the specimens under examination has the apex broken, but I presume the number of whorls may reach to ten. Eight may be counted in one of these. Dr. Budd mentions, in a note, that “out of six, five have a band.” The aperture is about one-fourth the length of the shell. This species is nearly allied to the striate variety of Mr. Say’s *M. Virginica*, which he called *multistriata*. The *Buddii* may be distinguished by its being flattened on the whorls, in being more angular on the superior part of the whorls, and in being more attenuate.

MELANIA HARPA. Pl. IX. Fig. 45.

Testâ striatâ, conoideâ, subcrassâ, corneâ; spirâ subelevatâ; suturis subimpressis; anfractibus subconvexis; aperturâ parvâ, ellipticâ, ad basim angulatâ, intus albidâ.

Shell striate, conical, rather thick, horn-colour; spire rather elevated; sutures rather impressed; whorls somewhat convex; aperture small, elliptical, angular at the base, within whitish.

Hab. Tuscaloosa, Alabama. B. W. Budd, M. D.

Cabinet of Dr. Budd.

Diam. .42,

Length .8 of an inch.

Remarks.—I am not able to place this with any of the species submitted to me by Dr. Budd, and although a single specimen only is under examination, I have considered it new. It has some resemblance to *M. Haysiana*, but is not so cylindrical, and the aperture is not so narrow. It is transversely striate over the whole whorls. The length of the aperture is about two-fifths the length of the shell. The aperture being eroded, the number of whorls cannot be ascertained.

MELANIA ARCTATA. Pl. IX. Fig. 46.

Testâ striatâ, coarctatâ, crassâ, luteo-corneâ; spirâ conoideâ; suturis valdè impressis; anfractibus senis, planulatis; aperturâ parvâ, rhomboideâ, intus albidâ.

Shell striate, compressed, thick, yellowish horn-colour; spire conical; sutures much impressed; whorls six, flattened; aperture small, rhomboidal, within whitish.

Hab. uscaloosa, Alabama. B. W. Budd, M. D.

My cabinet and cabinet of Dr. Budd.

Diam. .40,

Length .90 of an inch.

Remarks.—Among the seven specimens before me there is a good deal of difference. Some are darker than others. Several have the superior portion of the whorl rising into a ridge, quite nodose, while others are entirely without it. This species has more resemblance to *M. Haysiana* than any other which has come under my notice. It is not, however, so elliptical a shell, and the aperture is shorter. The aperture of the *arctata* is rather more than one-third the length of the shell; is obtusely angular below, and somewhat acutely angular above, where it is thickened.

MELANIA CREBRI-STRIATA. Pl. IX. Fig. 47.

Testâ transversè et crebriSSimè striatâ, subfusiformi, crassâ, luteo-corneâ; spirâ obtusâ; suturis impressis; anfractibus subconvexis; aperturâ parvâ, subovatâ, ad basim angulatâ, intus albidâ; columellâ inflectâ supernè incrassatâ.

Shell transversely and very closely striate, nearly fusiform, thick, yellowish horn-colour; spire obtuse; sutures impressed; whorls somewhat convex; aperture small, rather ovate, angular at the base, within whitish; columella inflected and thickened above.

Hab. Tuscaloosa, Alabama. B. W. Budd, M. D.

My cabinet and cabinet of Dr. Budd.

Diam. .40,

Length .76 of an inch.

Remarks.—This species is nearly allied to *M. impressa*, (Nobis,) but may be distinguished by its colour being yellowish, and by its coarser striæ. Its aperture also is smaller. The three specimens before me are very differently banded, one having nine, another three, and the last a rather broad one near the upper part of the whorl. These are only seen on the inside. The apex of each being eroded, the number of the whorls could not be accurately counted. Perhaps there are six. The striæ are so strong that they cause the edge of the outer lip to be crenate. The aperture is about two-fifths the length of the shell. On the superior whorls there are broad, slightly elevated, somewhat oblique ribs. The number of striæ on the three specimens before me are, respectively, sixteen, eighteen, and twenty.

MELANIA NOBILIS. Pl. IX. Fig. 48.

Testâ tuberculatâ, conoideâ, subcrassâ, luteo-corneâ; spirâ elevatâ; suturis irregulariter undulatis; anfractibus planulatis, in medio tuberculatis; aperturâ subgrandi, productâ, ad basim angulatâ et canaliculatâ, intus luteâ; columellâ tortâ.

Shell tuberculate, conical, rather thick, yellowish horn-colour; spire elevated; sutures irregularly undulate; whorls flattened, in the middle tuberculate; aperture rather large, elongated, angular, and channelled at the base, within yellowish; columella twisted.

Hab. Alabama. Major Le Conte.

Cabinet of Major Le Conte.

Diam. .72,

Length 1.7 inches.

Remarks.—This is among the finest of our American species. It is remarkable for its large size and extended sinus, which allies it to the genus *Io*, in which it might, with no great impropriety, be placed. The specimen before me has eight whorls, and the broken

apex would probably present about three more. The central ones have a dark band below, and are of a rather bright horn-colour above. In this specimen there is a rather coarse stria above the row of tubercles, and two smaller ones below. The margin of the outer lip is quite sinuous. It has some resemblance to *M. excurata*, Con., but may be distinguished by having a longer fuse, and in the position of the tubercles, which are not oblique, as described in that shell. When other specimens shall be observed it may be found to differ in some of the characters described above. Aperture rather more than one-third the length of the shell.

MELANIA PERNODOSA. Pl. IX. Fig. 49.

Testâ tuberculatâ, conoidâ, subcrassâ, corned, infernè striatâ; spirâ elevatâ, ad apicem costatâ; suturis undulatis; anfractibus octonis, planulatis, pernodosis; aperturâ parvâ, ad basim angulatâ et canaliculatâ, intus albidâ.

Shell tuberculate, conical, rather thick, horn-colour, striate below; spire elevated, ribbed on the apex; sutures undulated; whorls eight, flattened, tuberculate on the inferior portion; aperture small, angular, and canaliculate at the base, within white.

Hab. Cypress Creek, Florence, Alabama. T. R. Dutton.

My cabinet and cabinet of Mr. Dutton.

Diam. .4,

Length .68 of an inch.

Remarks.—This is a very remarkable species, having numerous, somewhat oblique tubercles, thickly set in a single row on the middle of the whorls. In the specimen before me, the only one I have seen, there is a dark spot between each of the tubercles. Towards the apex, the tubercles are more elongate and closely set, so as absolutely to become ribs across the whole of the whorl. The aperture is rather more than one-third the length of the shell. The striae on the inferior half of the whorls are very regular and distinct, and number eight in this specimen.

ANCULOSA SQUALIDA. Pl. IX. Fig. 50.

Testâ lævi, vel rotundâ vel ellipticâ, percrassâ, tenebroso-corned; spirâ obtusâ; suturis vix impressis; aperturâ magnâ, subrotundâ, intus albidâ; columellâ percrassâ.

Shell smooth, rounded or elliptical, very thick, dark horn-colour; spire obtuse; sutures scarcely impressed; aperture small, nearly round, within white; columella very thick.

Hab. Tuscaloosa, Alabama. B. W. Budd, M. D.

My cabinet and cabinet of Dr. Budd.

Diam. .45,

Length .77 of an inch.

Remarks.—Dr. Budd submitted five specimens to me, and, as is frequently the case, in this genus, I do not find any two of the five exactly of the same outline. One is nearly round and presents but a single whorl. Another, a younger and more perfect specimen, is somewhat elliptical, and presents five whorls and a mammilate form. A third specimen is quite elliptical, the spire being obtusely conical. It is a very solid species, with a broad, thick columella, and a considerable callus above. All the five are obscurely banded. This species is allied to *A. prærosa*, Say, but differs somewhat in form, and has bands, not spotted lines. In some of the specimens the aperture is nearly the whole length of the shell.

ANCULOSA TINTINNABULUM. Pl. IX. Fig. 51.

Testâ lævi, obtuso-conicâ, campanulatâ, fasciatâ, percrassâ, luteâ; spirâ brevi; suturis impressis; anfractibus quinis, impressis; aperturâ rotundâ, subgrandi; columellâ percrassâ, supernè callosâ.

Shell smooth, obtusely conical, bell-shaped, banded, very thick, yellow; spire short; sutures impressed; whorls five, impressed; aperture rather large, round; columella very thick, callous above.

Hab. Tennessee—E. Foreman, M. D. Tuscaloosa, Alabama—B. W. Budd, M. D.

My cabinet and cabinets of Dr. Foreman and Dr. Budd.

Diam. .48,

Length .70 of an inch.

Remarks.—The peculiar, constricted lower whorl, giving a campanulate form to this shell, will distinguish it at once from other species. Six specimens before me are all yellow, with broad, brown bands. A single specimen is perfect enough in the spire to make out five whorls. Two of the specimens are white on the columella, and four are tinted with brown. The outline is very remarkable, in its campanulate form. The mouth, in the perfect specimen, is about two-thirds the length of the shell.

SCHIZOSTOMA* PAGODA. Pl. IX. Fig. 52.

Testâ carinatâ, conicâ, subcrassâ, tenebroso-corneâ; spirâ subobtusâ; suturis valdè impressis; anfractibus senis; fissurâ parvâ; aperturâ ellipticâ, intus albidâ; columellâ lævi.

Shell carinate, conical, rather thick, dark horn-colour; spire rather short; sutures very much impressed; whorls six; fissure small; aperture elliptical, within whitish; columella smooth.

Hab. Tuscaloosa, Alabama. B. W. Budd, M. D.

My cabinet and cabinet of Dr. Budd.

Diam. .35,

Length .75 of an inch.

Remarks.—Three of this interesting species are before me. They are very distinct, and may easily be known by the carina being very acute on the superior whorls, presenting the appearance of a Chinese pagoda. The lower whorl is slightly and irregularly striate. The fissure is not deep, but rather wide, being about one-fifth the length of the whorl. The columella at the base is rather angular. The aperture is rather more than one-third the length of the shell.

* In a paper read before the society December 16, 1842, I described two species belonging to the *Melanianæ*, with the pleuromose character of a fissure in the outer lip. For one I proposed the name of *Melania excisa*, the other *Anculosa incisa*, and presuming that the shells bearing this characteristic, so remarkable in a *Melanian*, would require to be placed in a new genus, I then proposed the name of *Schizostoma*. Since then, five or six other species have been observed, and the *genus* may be thus characterized:

Testa vel conica vel fusiformis. Labrum supernè fissurâ. Apertura ovata. Columella lævis, incurva. Operculum

No operculum has come under my notice, but I can scarcely doubt that it will be found to be horny, and to resemble, in other respects, that of *Melania*.

SCHIZOSTOMA BUDDII. Pl. IX. Fig. 53.

Testá striatá, subfusiformi, crassá, tenebroso-corneá; spirá obtuso-conicá; suturis irregulariter impressis; anfractibus senis, subinflatis; fissurá parvâ, obliquâ; aperturâ magnâ, rhomboideâ, intus albidâ; columellâ supernè callosâ.

Shell striate, subfusiform, thick, dark horn-coloured; spire obtusely conical; sutures irregularly impressed; whorls six, rather inflated; fissure small, oblique; aperture large, rhomboidal, whitish within; columella thickened above.

Hab. Tuscaloosa, Alabama. B. W. Budd, M. D.

My cabinet and cabinet of Dr. Budd.

Diam. .47,

Length .83 of an inch.

Remarks.—This is a robust shell, being thicker and heavier than any other species of this genus which I have observed. The aperture is nearly one-half the length of the shell. Two specimens were sent together by Dr. Budd, presuming they were the same. One, however, which is not quite a mature shell, has little or no fissure. The other, from which the description is made, has a wide but short fissure, and the margin of it opens obliquely.

SCHIZOSTOMA BABYLONICUM. Pl. IX. Fig. 54.

Testá striatâ, subfusiformi, subcrassâ, castaneâ; spirâ obtuso-conicâ; suturis impressis; anfractibus planulatis; fissurâ parvâ; aperturâ magnâ, ellipticâ, intus subcarneâ; columellâ lævi, ad basim angulatâ, supernè incrassatâ.

Shell striate, somewhat fusiform, rather thick, chestnut-coloured; spire obtusely conical; sutures impressed; whorls flattened; fissure small; aperture large, elliptical, somewhat flesh-coloured within; columella smooth, angular at the base, thickened above.

Hab. Tuscaloosa, Alabama. B. W. Budd, M. D.

Cabinet of Dr. Budd.

Diam. .48,

Length 1 inch.

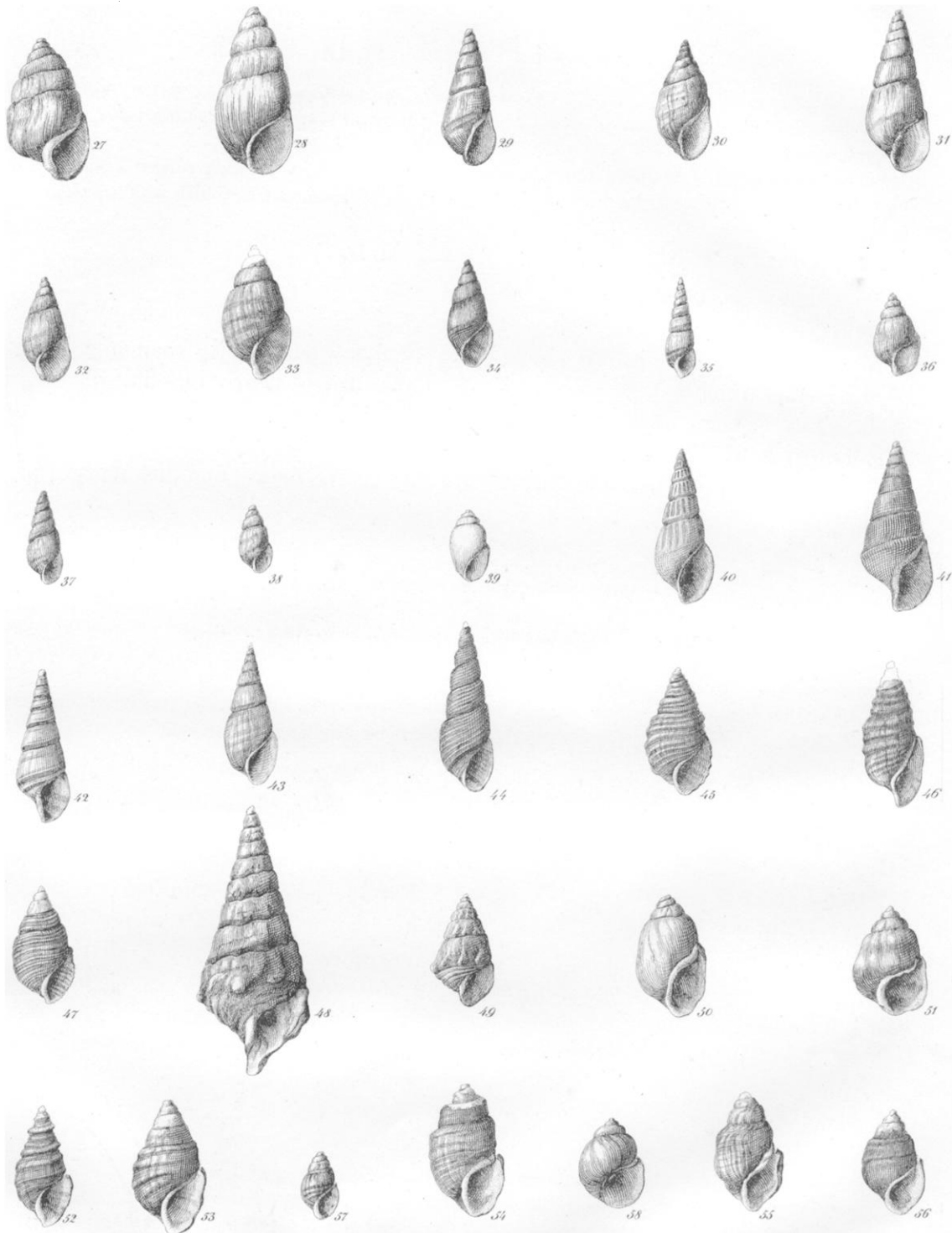
Remarks.—A single specimen only of this species was submitted to me. It differs from the other described species in being angular at the superior portion of the whorl along the lower margin of the fissure, making quite a shoulder, and giving it the Babylonian appearance. The fissure is wide, but not deep. The apex being much eroded, the number of whorls could not be ascertained. The aperture is nearly half the length of the shell. The deposit on the columella in this individual does not cover the perforation. In others, this may differ. The outer lip is quite patulous.

SCHIZOSTOMA CONSTRICTUM. Pl. IX. Fig. 55.

Testá lævi, subfusiformi, subtenui, luteo-corneâ; spirâ obtusâ; suturis impressis; anfractibus coarctatis; fissurâ submagnâ, subobliquâ; aperturâ magnâ, ellipticâ, intus albidâ; columellâ lævi, ad basim subangulatâ.

Shell smooth, somewhat fusiform, rather thin, yellowish horn-colour; spire obtuse; sutures impressed; whorls constricted; fissure rather large, somewhat oblique; aperture large, elliptical, whitish within; columella smooth, subangular at the base.

MELANIA &c.



- | | | | |
|---------------------------|--------------------------------|--------------------------------|----------------------------------|
| 27 <i>M. solida</i> | 35 <i>M. Haleiana</i> | 43 <i>M. pallescens</i> | 51 <i>A. tintinnabulum</i> |
| 28 <i>Proteus</i> | 36 <i>pumila</i> | 44 <i>Buddii</i> | 52 <i>S. pagoda</i> |
| 29 <i>lugubris</i> | 37 <i>Alexandrensis</i> | 45 <i>harpa</i> | 53 <i>Buddii</i> |
| 30 <i>torta</i> | 38 <i>ovoidea</i> | 46 <i>arctata</i> | 54 <i>Babylonicum</i> |
| 31 <i>spurca</i> | 39 <i>auriculiformis</i> | 47 <i>crebre striata</i> | 55 <i>constrictum</i> |
| 32 <i>abrupta</i> | 40 <i>carino-costata</i> | 48 <i>nobilis</i> | 56 <i>funiculatum</i> |
| 33 <i>basalis</i> | 41 <i>filum</i> | 49 <i>pernodosa</i> | 57 <i>laciniatum</i> |
| 34 <i>modesta</i> | 42 <i>spinalis</i> | 50 <i>A. squalida</i> | 58 <i>P. Haleiana</i> |

Hab. Tuscaloosa, Alabama. B. W. Budd, M. D.

Cabinet of Dr. Budd.

Diam. .43,

Length .75 of an inch.

Remarks.—A single specimen only of this species was among the shells submitted to me by Dr. Budd. It differs from those I have seen in having a rather broad channel impressed immediately above the centre of the whorl. This character may, however, differ in other individuals. The fissure is rather wide, but not deep. The apex being eroded, the number of whorls could not be ascertained. The aperture is about one-half the length of the shell. There is no appearance of bands about this specimen.

SCHIZOSTOMA FUNICULATUM. Pl. IX. Fig. 56.

Testâ striatâ, ellipticâ, subcrassâ, castaneâ; spirâ obtusâ; suturis valdè impressis; anfractibus convexis; fissurâ submagnâ, obliquâ; aperturâ magnâ, ellipticâ; columellâ supernè callosâ.

Shell striate, elliptical, rather thick, chestnut-coloured; spire obtuse; sutures much impressed; whorls convex; fissure rather large, oblique; aperture large, elliptical; columella thickened above.

Hab. Tuscaloosa, Alabama. B. W. Budd, M. D.

Cabinet of Dr. Budd.

Diam. .4,

Length .66 of an inch.

Remarks.—A single specimen only was obtained by Dr. Budd of this species. It is short, stout, and almost subrotund. It has two elevated, cord-like lines, revolving on the whorls. One immediately under the suture, the other below that again. The aperture is more than half the length of the shell. The apex is so much eroded as to prevent the number of whorls being ascertained. There are about six.

SCHIZOSTOMA LACINIATUM. Pl. IX. Fig. 57.

Testâ lævi, obtuso-conicâ, subcrassâ, fasciatâ, luteo-corneâ; spirâ obtusâ; suturis exaratis; anfractibus convexis; fissurâ profundâ; aperturâ ellipticâ, intus albidâ; columellâ lævi, supernè incrassatâ.

Shell smooth, obtusely conical, rather thick, banded, yellowish horn-colour; spire obtuse; sutures excavated; whorls convex; fissure deep; aperture elliptical, whitish within; columella smooth, thickened above.

Hab. Tuscaloosa, Alabama. B. W. Budd, M. D.

Cabinet of Dr. Budd.

Diam. .25,

Length .45 of an inch.

Remarks.—This is the smallest species I have seen. The mouth and fissure of this specimen are perfect, but the apex is much eroded, and the number of whorls cannot therefore be ascertained. There are four bands very distinctly marked on the inside. The aperture appears to be about one-half the length of the shell. The fissure is very narrow and remarkably deep, extending nearly one-fourth round the whorl. The cicatrix along the suture is of a lighter colour. The marks of growth are distinct, and give a lacinate appearance.

PALUDINA HALEIANA. Pl. IX. Fig. 58.

Testâ lævi, ventricosô-conoideâ, subtenui, rufo-corneâ, imperforatâ; spirâ brevi; suturis valdè impressis; anfractibus quaternis, subconvexis; aperturâ magnâ, subrotundâ, cæruleâ.

Shell smooth, ventricosely conical, rather thin, reddish horn-colour, imperforate; spire short; sutures much impressed; whorls four, nearly convex; aperture large, nearly round, bluish.

Hab. Alexandria, Louisiana. J. Hale, M. D.

My cabinet and cabinet of Dr. Hale.

Diam. .4,

Length .55 of an inch.

Remarks.—This species is nearly allied to the *P. Troostiana*, (Nobis,) but is rather smaller, of a darker colour, not quite so rotund, and imperforate. These differences would distinguish it without difficulty. In the *Haleiana* there is a disposition in most of the specimens to a compression below the sutures. This makes quite a shoulder at the sutures and prevents the mouth from being regular.

NOTE.—Since the first sheet of this paper was printed off, two more *Melania*, by Dunker, have been added to the list, making in all three hundred and ninety-seven.

CATALOGUE OF THE GENUS MELANIA,

RECENT AND FOSSIL.

<i>Melania abjecta</i> , Haldeman.	<i>Melania annulata</i> , Ferussac.
“ <i>abrupta</i> , Lea.	“ <i>anthracina</i> , Von Den Busch.
“ <i>acicula</i> , (Eulima,) . . . Philippi.	“ <i>approxima</i> , Haldeman.
“ <i>aculeus</i> , Lea.	“ <i>arata</i> , Lea.
“ <i>acuminata</i> , Dunker.	“ <i>arctata</i> , Lea.
“ <i>acuto-carinata</i> , Lea.	“ <i>arcuata</i> , Zool. Soc., 1843.
“ <i>acuta</i> , Lea.	“ <i>armigera</i> , Say.
“ <i>adspersa</i> , Torschel.	“ <i>asperata</i> , Lamarck.
“ <i>Ægyptiaca</i> , Benson.	“ <i>aspirans</i> , Hinds.
“ <i>æqualis</i> , Hald.	“ <i>attenuata</i> , Woodward. <i>f.</i>
“ <i>Æthiops</i> , Beck.	“ <i>ater</i> , Rich.
“ <i>afra</i> , Zeigler.	“ <i>auricularis</i> , Ferussac.
“ <i>agnata</i> , Pfeiffer.	“ <i>auriculæformis</i> , Lea.
“ <i>Alexandrensis</i> , Lea.	“ <i>auricula</i> , Grateloup. <i>f.</i>
“ <i>altilis</i> , Lea.	“ <i>aurita</i> , (Pirena, Lam.,) . . Rang.
“ <i>alveare</i> , Conrad.	“ <i>auriscalpium</i> , Menke.
“ <i>amarula</i> , Lamarck.	“ <i>Babylonica</i> , Lea.
“ <i>angulosa</i> , Menke.	“ <i>basalis</i> , Lea.
“ <i>annulifera</i> , Conrad.	“ <i>Batana</i> , Gould.

<i>Melania bella-crenata</i> , Haldeman.	<i>Melania costata</i> , Quoy, Desh.
" <i>bella</i> , Conrad.	" <i>costata</i> , Ravenel.
" <i>bellicosa</i> , Hinds.	" <i>costata</i> , Sowerby. <i>f.</i>
" <i>bicarinata</i> , Grateloup.	" <i>costata</i> , Quoy, Desh.
" <i>bilineata</i> , Gold, Pfeif. <i>f.</i>	" <i>costellata</i> , Lamarck. <i>f.</i>
" <i>bilineata</i> , Pfeif. <i>f.</i>	" <i>costifera</i> , Haldeman.
" <i>bitæniata</i> , Conrad.	" <i>costulata</i> , Lea.
" <i>blanda</i> , Lea.	" <i>costulata</i> , Mühlfeld.
" <i>Boscii</i> , (Eulima,) Phil.	" <i>crassa</i> , Von Den Busch.
" <i>Boykiniana</i> , Lea.	" <i>crassa</i> , Parreyss.
" <i>breviformis</i> , Parreyss.	" <i>crebri-costata</i> , Lea.
" <i>brevis</i> , Lea.	" <i>crebri-striata</i> , Lea.
" <i>Brocchii</i> , Brown.	" <i>crenulata</i> , Deshayes.
" <i>buccinalis</i> , Deshayes.	" <i>cruentata</i> , Menke.
" <i>Buddii</i> , Lea.	" <i>Curreyana</i> , Lea.
" <i>Byronensis</i> , ?	" <i>curta</i> , Haldeman.
" <i>caliginosa</i> , Lea.	" <i>curta</i> , Menke.
" <i>Cambessedesii</i> , { <i>Eulima elegantissima</i> , Pay. } Pay.	" <i>curvata</i> , Lea.
" <i>campanella</i> , Philippi.	" <i>curvicosta</i> , Deshayes. <i>f.</i>
" <i>canaliculata</i> , Say.	" <i>Cuvieri</i> , Deshayes. <i>f.</i>
" <i>cancellata</i> , Say.	" <i>cylindracea</i> , Conrad.
" <i>cancellata</i> , (?)	" <i>decora</i> , Lea.
" <i>canicularis</i> , Lamarck.	" <i>decollata</i> , Lamarck.
" <i>carinifera</i> , Lamarck.	" <i>decussata</i> , Deshayes. <i>f.</i>
" <i>carino-costata</i> , Lea.	" <i>Dembea</i> , Ruppell.
" <i>carinata</i> , Ravenel.	" <i>depygis</i> , Say.
" <i>Carolinæ</i> , Gray.	" <i>Deshaysiana</i> , Lea.
" <i>castanea</i> , Lea.	" <i>dilatata</i> , Con.
" <i>catenarea</i> , Say.	" <i>distorta</i> , (Eulima,) Defrance. <i>f.</i>
" <i>catenoides</i> , Lea.	" <i>dubia</i> , Lamarck.
" <i>Celebensis</i> , Quoy, Desh.	" <i>dubiosa</i> , Lea.
" <i>Cincinnatiensis</i> , Lea.	" <i>Duisabonis</i> , Grateloup.
" <i>circincta</i> , Lea.	" <i>Duttoniana</i> , Lea.
" <i>clathrata</i> , Grat. <i>f.</i>	" <i>ebenum</i> , Lea.
" <i>clava</i> , Lamarck. <i>f.</i>	" <i>eburnea</i> , Mühlfeld. (?)
" <i>clavæformis</i> , Lea.	" <i>Edgariana</i> , Lea.
" <i>clavula</i> , Deshayes. <i>f.</i>	" <i>elegans</i> , Schmidt.
" <i>coarctata</i> , Lamarck.	" <i>elevata</i> , Say.
" <i>cochlearella</i> , (Rissoa,) Lamarck. <i>f.</i>	" <i>elongata</i> , Lea.
" <i>coffea</i> , Philippi.	" <i>erodes</i> , Zeigler.
" <i>columella</i> , Lea.	" <i>erosa</i> , Lesson.
" <i>comma</i> , Conrad.	" <i>erythrostoma</i> , Quoy, Desh.
" <i>concinna</i> , Lea.	" <i>exarata</i> , Menke.
" <i>congesta</i> , Say.	" <i>exarata</i> , Lea.
" <i>conica</i> , Say.	" <i>excisa</i> , Lea.
" <i>conica</i> , Gray.	" <i>excurata</i> , Con.
" <i>constricta</i> , Lamarck. <i>f.</i>	" <i>exilis</i> , Haldeman.
" <i>cornea</i> , Kruster.	" <i>expansa</i> , Lea.
" <i>coronata</i> , Von Den Busch.	" <i>fasciata</i> , Sowerby. <i>f.</i>
" <i>coronata</i> , Kruster.	" <i>fasciata</i> , Von Den Busch.
" <i>corrugata</i> , Lamarck.	" <i>fasciata</i> , Menke.
	" <i>fasciolata</i> , Lamarck.

<i>Melania figurata</i> , Hinds.	<i>Melania integra</i> , Say.
“ <i>filum</i> , Lea.	“ <i>intermedia</i> , Von Den Busch.
“ <i>flamigera</i> , Dunker.	“ <i>interrupta</i> , Haldeman.
“ <i>flammulata</i> , Von Den Busch.	“ <i>intersita</i> , Haldeman.
“ <i>flavida</i> , Dunker.	“ <i>isogona</i> , Say.
“ <i>florata</i> , Hinds.	“ <i>Jayana</i> , Lea.
“ <i>Florentiana</i> , Lea.	“ <i>Kirtlandiana</i> , Lea.
“ <i>fluminalis</i> , Mühlfeld.	“ <i>lactea</i> , Lamarck. <i>f.</i>
“ <i>Foremani</i> , Lea.	“ <i>læta</i> , Jay.
“ <i>formosa</i> , Conrad.	“ <i>lævigata</i> , Deshayes. <i>f.</i>
“ <i>fragilis</i> , Lamarck.	“ <i>lævis</i> , Lea.
“ <i>Frethii</i> , Gray.	“ <i>lævissima</i> , Sowerby.
“ <i>fulgurans</i> , Hinds.	“ <i>laqueata</i> , Say.
“ <i>fuliginosa</i> , Lea.	“ <i>Largillierti</i> , Philippi.
“ <i>fumosa</i> , Hinds.	“ <i>latebrosa</i> , Hinds.
“ <i>funiculus</i> , Quoy, Desh.	“ <i>Lecontiana</i> , Lea.
“ <i>fusca</i> , Rang.	“ <i>ligata</i> , Menke.
“ <i>fusca</i> , Philippi.	“ <i>lima</i> , Conrad.
“ <i>fuscata</i> , Deshayes.	“ <i>lineata</i> , Sowerby. <i>f.</i>
“ <i>fusiformis</i> , Lea.	“ <i>lineata</i> , Troschel.
“ <i>gaudiosa</i> , Hinds.	“ <i>lineolata</i> , Gray.
“ <i>glabra</i> , Lea.	“ <i>livescens</i> , Menke.
“ <i>glabrata</i> , Mühlfeld.	“ <i>lirata</i> , Menke.
“ <i>glans</i> , Von Den Busch.	“ <i>luctuosa</i> , Hinds.
“ <i>globula</i> , Lea.	“ <i>lugubris</i> , Lea.
“ <i>globulosa</i> , Grey.	“ <i>macilenta</i> , Menke.
“ <i>gracilis</i> , Lea.	“ <i>maculata</i> , Parreyss.
“ <i>gracilis</i> , Anthony, Hald.	“ <i>Madagascariensis</i> , Grateloup.
“ <i>grana</i> , Von Den Busch.	“ <i>magnifica</i> , Conrad.
“ <i>granifera</i> , Lamarck.	“ <i>marginata</i> , Lamarck. <i>f.</i>
“ <i>Haleiana</i> , Lea.	“ <i>Matoni</i> , Gray.
“ <i>harpa</i> , Lea.	“ <i>melanoides</i> , Conrad.
“ <i>harpæformis</i> , Hock, Desh. <i>f.</i>	“ <i>minima</i> , Sowerby. <i>f.</i>
“ <i>harpula</i> , Dunker.	“ <i>mitra</i> , Dunker.
“ <i>Haysiana</i> , Lea.	“ <i>mitra</i> , Desh., Lam.
“ <i>Heddingtonensis</i> , Sowerby. <i>f.</i>	“ <i>modesta</i> , Lea.
“ <i>Helvetica</i> , Michelin.	“ <i>mæsta</i> , Hinds.
“ <i>Henriettæ</i> , Gray.	“ <i>Molluccensis</i> , Quoy, Desh.
“ <i>Hildrethiana</i> , Lea.	“ <i>monozonalis</i> , Lea.
“ <i>Hollandri</i> , Ferussac.	“ <i>multilata</i> , Say.
“ <i>Holstonia</i> , Lea.	“ <i>multilineata</i> , Say.
“ <i>hordacea</i> , Lamarck. <i>f.</i>	“ <i>mutans</i> , Gould.
“ <i>Hugelii</i> , (<i>Melanopsis</i> ?) Philippi.	“ <i>nassula</i> , Conrad.
“ <i>Hydei</i> , Con.	“ <i>Niagarensis</i> , Lea.
“ <i>impressa</i> , Lea.	“ <i>Nickliniana</i> , Lea.
“ <i>inæquata</i> , Fischer de Valdh.	“ <i>nitens</i> , Lea.
“ <i>incerta</i> , Grat. <i>f.</i>	“ <i>nitida</i> , Lamarck.
“ <i>inermis</i> , Gray.	“ <i>nobilis</i> , Lea.
“ <i>inflata</i> , Lea.	“ <i>nodulosa</i> , Lea.
“ <i>inflata</i> , Haldeman.	“ <i>nupera</i> , Say.
“ <i>inflexa</i> , Phillips. <i>f.</i>	“ <i>obovata</i> , Say.
“ <i>inquinata</i> , Defrance. <i>f.</i>	“ <i>obtusa</i> , Lea.

<i>Melania occata</i> , Hinds.	<i>Melania Rogersii</i> , Conrad.
" <i>occidentalis</i> , Lea.	" <i>rufa</i> , Philippi.
" <i>Ocoeensis</i> , Lea.	" <i>rufescens</i> , Lea.
" <i>oliva</i> , Lea.	" <i>rufula</i> , Haldeman.
" <i>olivata</i> , Conrad.	" <i>rugosa</i> , Lea.
" <i>olivula</i> , Conrad.	" <i>salebrosa</i> , Conrad.
" <i>Ordiana</i> , Lea.	" <i>Sayii</i> , Ward.
" <i>ornata</i> , Von Den Busch.	" <i>scabra</i> , Fer., Desh.
" <i>ornata</i> , Grat. f.	" <i>scalaria</i> , Philippi.
" <i>ovalis</i> , Lea.	" <i>scalarina</i> , Pfeiffer.
" <i>ovoidea</i> , Lea.	" <i>scalaris</i> , Spix & Wagner.
" <i>ovularis</i> , Menke.	" <i>Scheideana</i> , Philippi.
" <i>Owenii</i> , Gray.	" <i>scolopaceus</i> , Lamarck.
" <i>pallescens</i> , Lea.	" <i>semicarinata</i> , Say.
" <i>pallida</i> , (Chemnitzia,) Philippi.	" <i>semicancellata</i> , Von Den Busch.
" <i>Papuensis</i> , Quoy, Desh.	" <i>semicostata</i> , Conrad.
" <i>perfusca</i> , Lea.	" <i>semidecussata</i> , Lamarck. f.
" <i>pernodosa</i> , Lea.	" <i>semigranosa</i> , Von Den Busch.
" <i>perpinguis</i> , Hinds.	" <i>semiplicata</i> , Lamarck. f.
" <i>picta</i> , Lea.	" <i>semistriata</i> , Lamarck. f.
" <i>picta</i> , Hinds.	" <i>setosa</i> , Swainson, Desh.
" <i>pilula</i> , Lea.	" <i>siccata</i> , Von Den Busch.
" <i>plicata</i> , Menke.	" <i>simplex</i> , Say.
" <i>plicata</i> , Lea.	" <i>solida</i> , Lea.
" <i>plicatula</i> , Desh.	" <i>soluta</i> , Philippi.
" <i>plicifera</i> , Lea.	" <i>sordida</i> , Lea.
" <i>pluristriata</i> , Say.	" <i>spina</i> , Grat. f.
" <i>Plutonis</i> , Hinds.	" <i>spinalis</i> , Lea.
" <i>polita</i> , Desh. f.	" <i>spinifera</i> , Adams.
" <i>portalis</i> , Rossmäessler.	" <i>spinulosa</i> , Lamarck, Phil.
" <i>Potosiensis</i> , Lea.	" <i>Spixiana</i> , Lea.
" <i>prærosa</i> , (Anculosa,) Say.	" <i>spurca</i> , Lea.
" <i>prasinata</i> , Con.	" <i>striata</i> , Sowerby. f.
" <i>producta</i> , Lea.	" <i>striatula</i> , Lea.
" <i>Proteus</i> , Lea.	" <i>strigilata</i> , Dunker.
" <i>proxima</i> , Say.	" <i>strigosa</i> , Lea.
" <i>pugilis</i> , Hinds.	" <i>stygia</i> , Say.
" <i>pulchella</i> , Anthony.	" <i>subcarinata</i> , Gray.
" <i>pumila</i> , Lea.	" <i>subcylindracea</i> , Lea.
" <i>punctata</i> , Lamarck.	" <i>subglobosa</i> , Say.
" <i>pygmæa</i> , Hoch., Desh.	" <i>subsolida</i> , Lea.
" <i>pyramis</i> , Benson.	" <i>substricta</i> , Haldeman.
" <i>pyramidata</i> , Sowerby. f.	" <i>subulata</i> , Lamarck.
" <i>pyramidata</i> , Hinds.	" <i>subularis</i> , Lea.
" <i>pyrenella</i> , Conrad.	" <i>sulcata</i> , Sowerby. f.
" <i>quadriseriata</i> , Gray.	" <i>sulcosa</i> , Lea.
" <i>Rangii</i> , Deshayes.	" <i>sulcosa</i> , Menke.
" <i>regularis</i> , Lea.	" <i>suturalis</i> , Haldeman.
" <i>Reirvardii</i> , Van Haan.	" <i>symmetrica</i> , Haldeman.
" <i>retusa</i> , Gray.	" <i>Taitiana</i> , Lea.
" <i>Riqueti</i> , Grateloup.	" <i>Tarbelliana</i> , Grateloup. f.
" <i>robusta</i> , Lea.	" <i>tenebrosa</i> , Lea.

<i>Melania terebella</i> , Mühlfeld.	<i>Melania tympanorum</i> , (<i>Pirena aurita</i> , Lam.,) Deshayes.
" <i>terebra</i> , Von Den Busch.	" <i>tympanotonus</i> , Deshayes.
" <i>terebialis</i> , Lea.	" <i>uncialis</i> , Haldeman.
" <i>teres</i> , Lea.	" <i>undulata</i> , Say.
" <i>testudinaria</i> , Von Den Busch.	" <i>uniformis</i> , Quoy, Desh.
" <i>thiarella</i> , Lamarck.	" <i>Vanuxemiana</i> , Lea.
" <i>Tirouri</i> , Ferussac.	" <i>variabilis</i> , Defrance. <i>f</i> .
" <i>torquata</i> , Lea.	" <i>varicosa</i> , Ward.
" <i>torquata</i> , Von Den Busch.	" <i>varicosa</i> , Troschell.
" <i>torta</i> , Lea.	" <i>variegata</i> , Menke.
" <i>tricarinata</i> , Woodward. <i>f</i> .	" <i>ventricosa</i> , Rang.
" <i>trilineata</i> , Say.	" <i>venusta</i> , Lea.
" <i>triticea</i> , Ferussac. <i>f</i> .	" <i>verrucosa</i> , Hinds.
" <i>trochiformis</i> , Conrad.	" <i>vestita</i> , Conrad.
" <i>Troostiana</i> , Lea.	" <i>vibex</i> , Mühlfeld.
" <i>truncata</i> , Lamarck.	" <i>virgata</i> , Lea.
" <i>truncatula</i> , Lamarck.	" <i>Virginica</i> , Say.
" <i>tuberculata</i> , Muller. (?)	" <i>virgulata</i> , Fer., Desh.
" <i>tuberculata</i> , Von Den Busch.	" <i>viridis</i> , Lea.
" <i>tuberculata</i> , Lea.	" <i>vittata</i> , Philippi. <i>f</i> .
" <i>tuberculata</i> , Spix & Wagner.	" <i>Warderiana</i> , Lea.
" <i>tuberculosa</i> , Rang.	" <i>Winteri</i> , Von Den Busch.
" <i>turgida</i> , Lea.	" <i>zonata</i> , Von Den Busch.
" <i>turritella</i> , Dunker.	" <i>Zinkeni</i> , Dunker.

Since the preceding sheet was put to press, I have received from Dr. Philippi some numbers of his "Abbildungen und Beschreibungen neuer oder wenig gekannter Conchylien," in which I find the following *Melaniæ* not in the above catalogue. They increase the list of species to four hundred and seventeen.

<i>Melania</i> (<i>Melanopsis</i>) <i>Braziliensis</i> , . Moricand.	<i>Melania</i> (<i>Melanopsis</i>) <i>Parreyssii</i> , . Von Mühlfeld.
" <i>cingulata</i> , Jonas.	" <i>porcata</i> , Jonas.
" <i>costata</i> , Olivier.	" <i>pyramis</i> , Von Den Busch.
" (<i>Melanopsis</i>) <i>crenocarina</i> , . Moricand.	" <i>rivularis</i> , Philippi.
" <i>Gruneri</i> , Jonas.	" <i>scabrella</i> , Philippi.
" (<i>Melanopsis</i>) <i>Helena</i> , . Meder.	" <i>semicostata</i> , Philippi.
" <i>inhonesta</i> , Von Den Busch.	" <i>subnodosa</i> , Philippi.
" <i>Javanica</i> , Von Den Busch.	" <i>suturalis</i> , Philippi.
" (<i>Melanopsis</i>) <i>Kotchy</i> , . Von Den Busch.	" <i>turgidula</i> , Philippi.
" (?) <i>obesa</i> , Philippi.	" (<i>Melanopsis</i>) <i>variabilis</i> , . Von Den Busch.

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